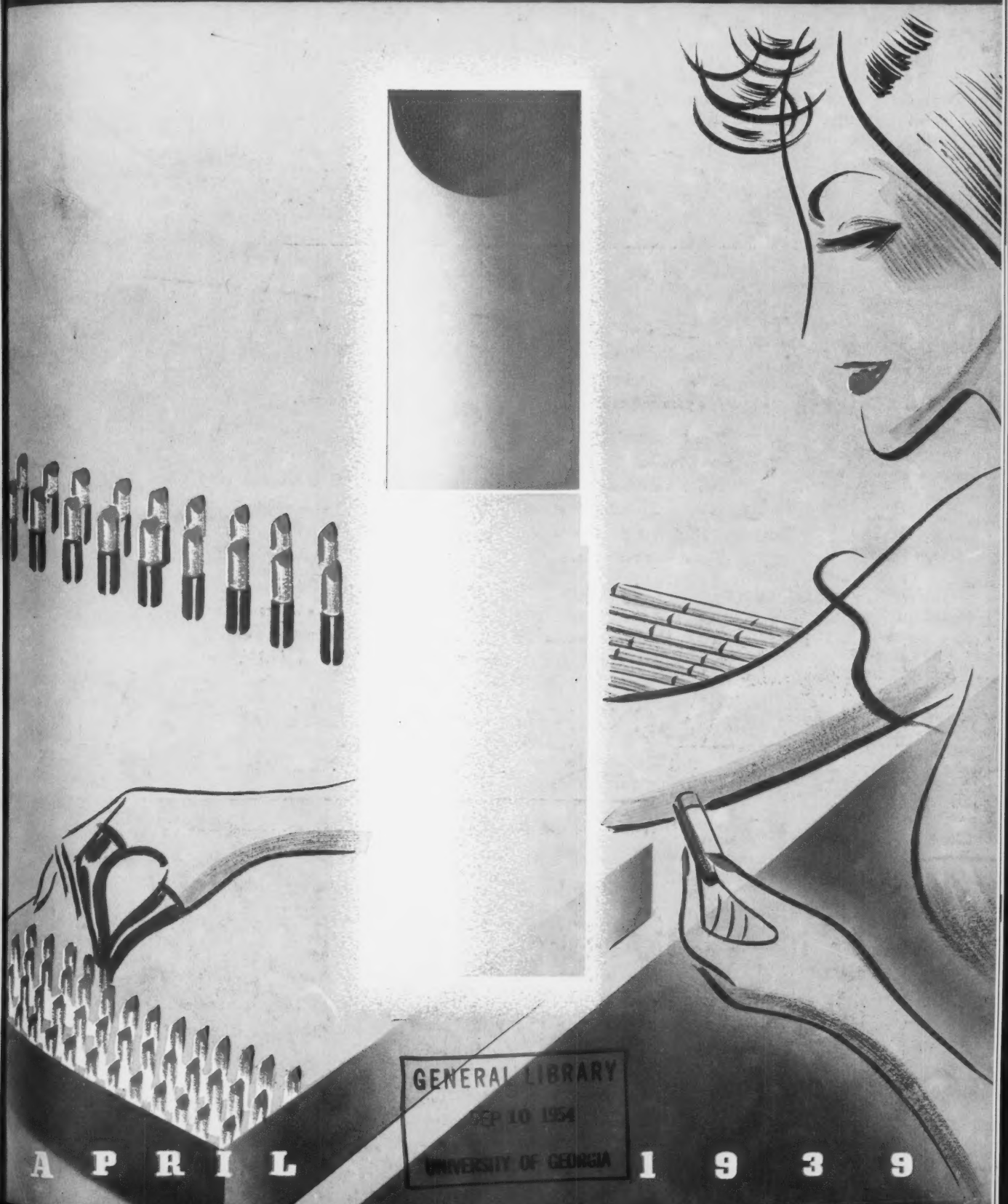
DRUG AND COSMETIC INDUSTRY



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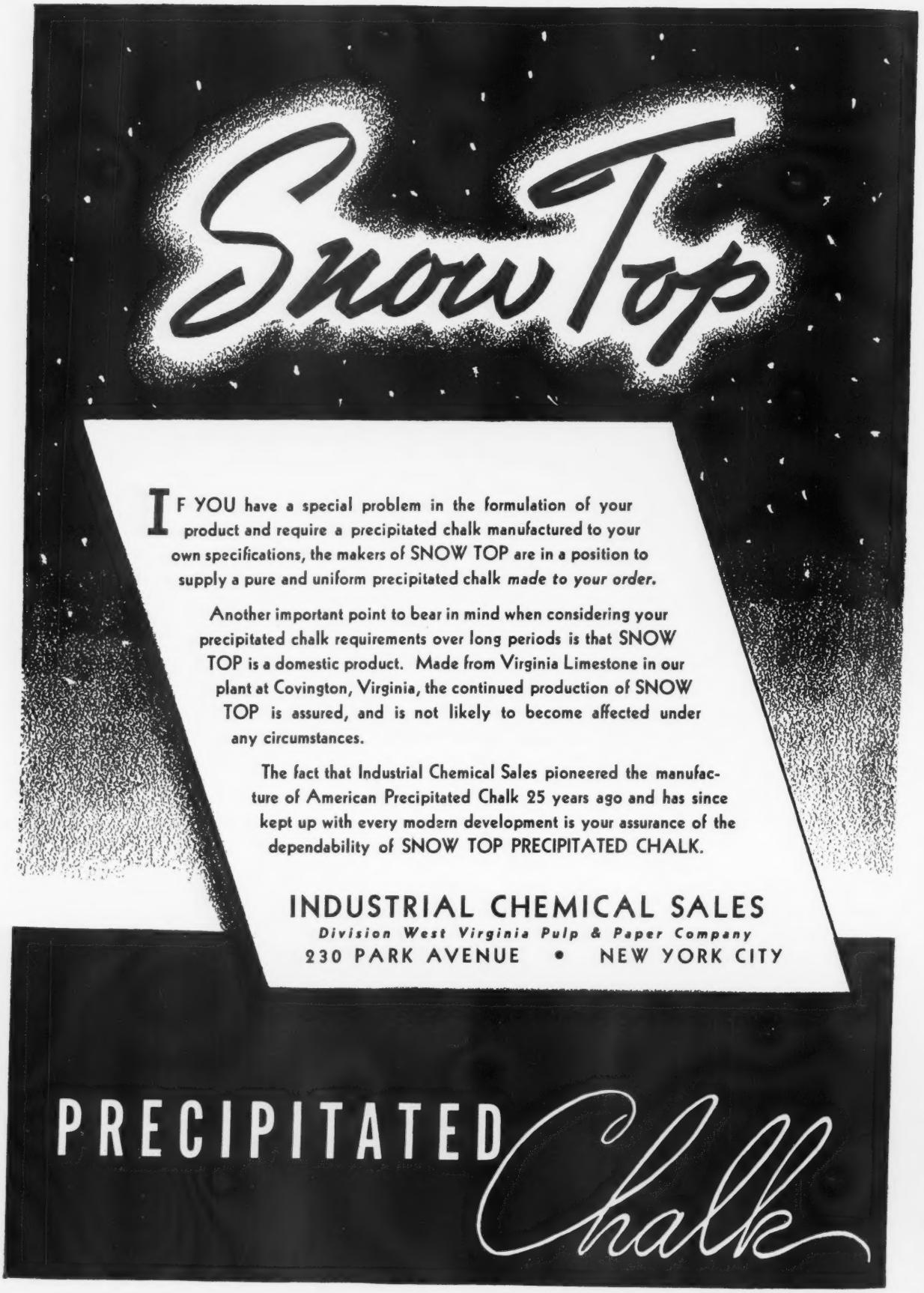
Snow Top
IF YOU have a special problem in the formulation of your product and require a precipitated chalk manufactured to your own specifications, the makers of SNOW TOP are in a position to supply a pure and uniform precipitated chalk *made to your order.*
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The fact that Industrial Chemical Sales pioneered the manufacture of American Precipitated Chalk 25 years ago and has since kept up with every modern development is your assurance of the dependability of SNOW TOP PRECIPITATED CHALK.
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Division West Virginia Pulp & Paper Company
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Off to a flying start is the trans-Atlantic air service. The Yankee Clipper, modern descendant of the Wrights' first plane, now flying the course selected, is creating feverish interest in this venture as well as securing new enthusiasm for all aviation. Off to a flying start, too, are new glass packages sealed with the Phoenix C T Cap, no knurl, curled under edge. This sleek, stream-lined adaptation of the original Phoenix C T Cap is also creating new interest in packages long in service.

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Sealed with Phoenix C T Screw Cap curled under edge.

DRUG AND COSMETIC INDUSTRY

APRIL 1939

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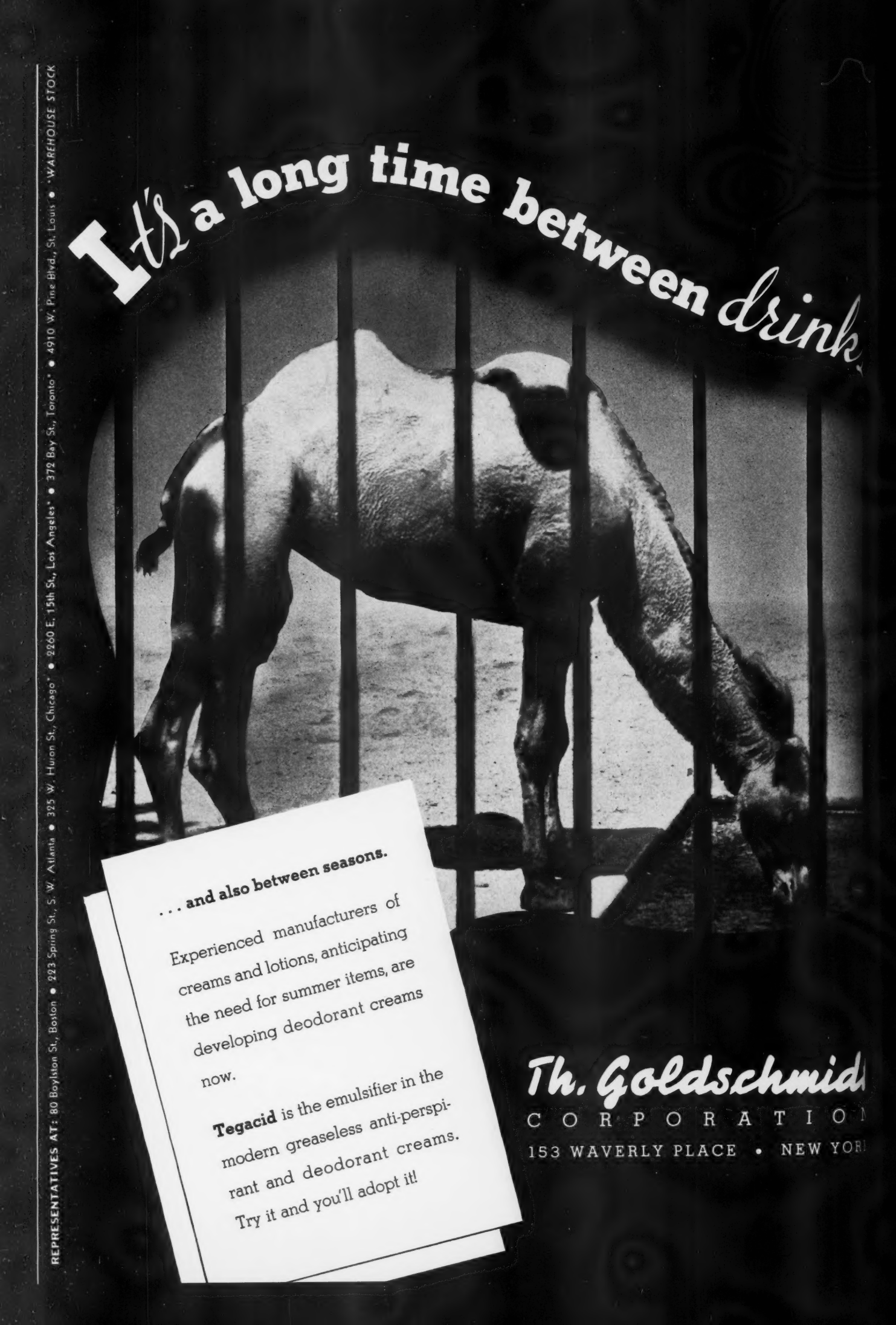
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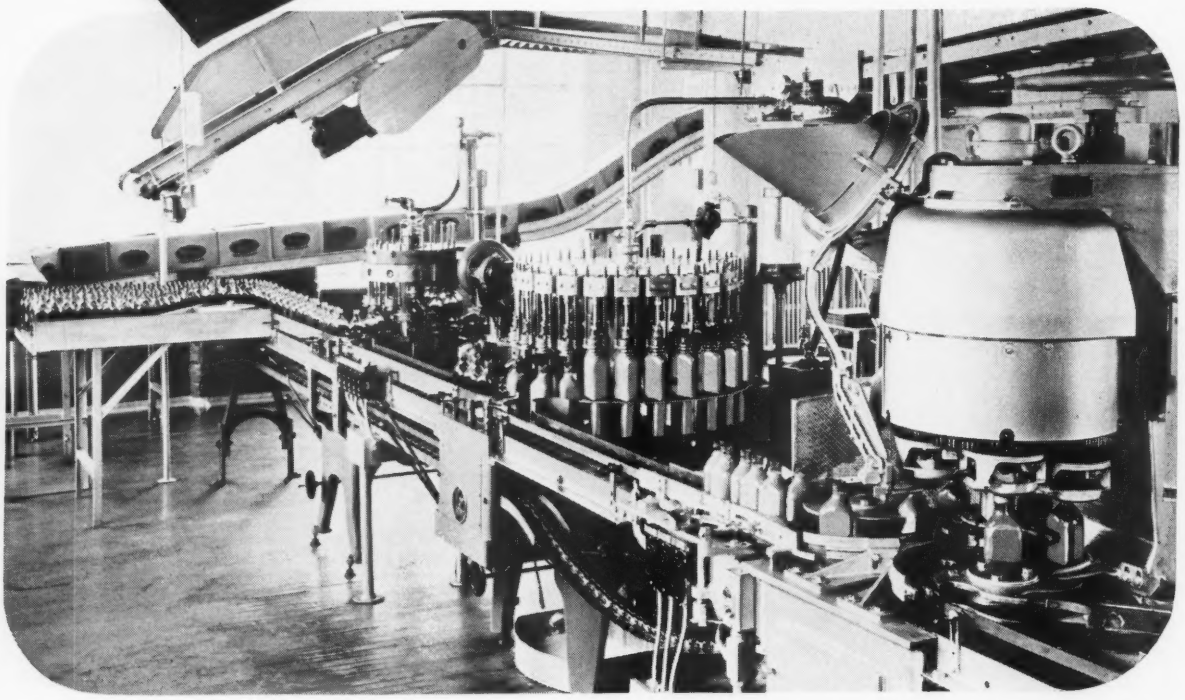

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Norwich installed them only after being convinced that they qualify on these points: *1. Contribute to controlling and improving* the quality and appearance of Norwich products. 2. Provide high flexibility to *meet probable demands as to output speed* and variety of packages and products.

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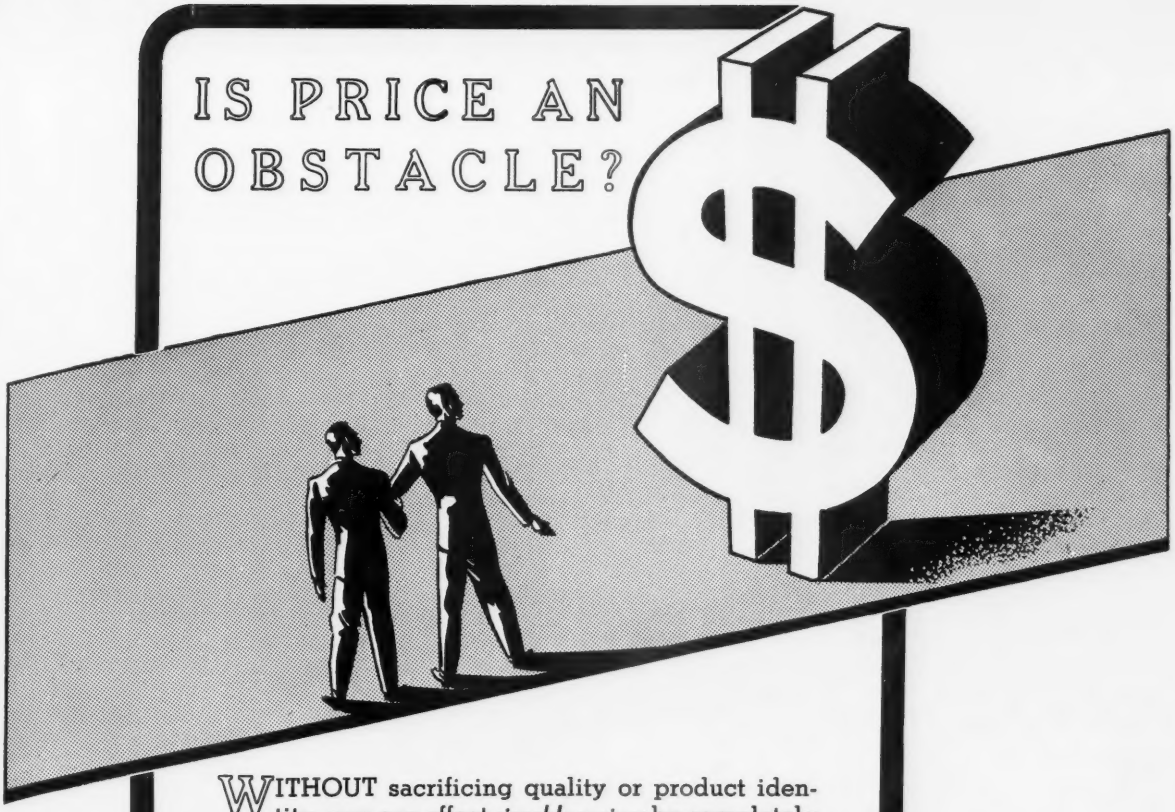

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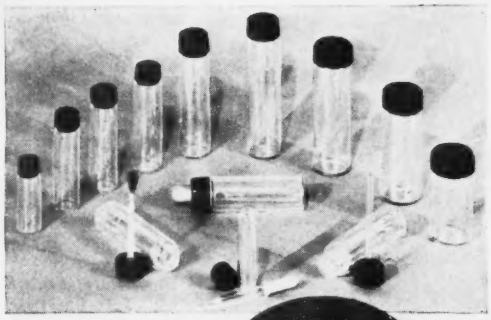

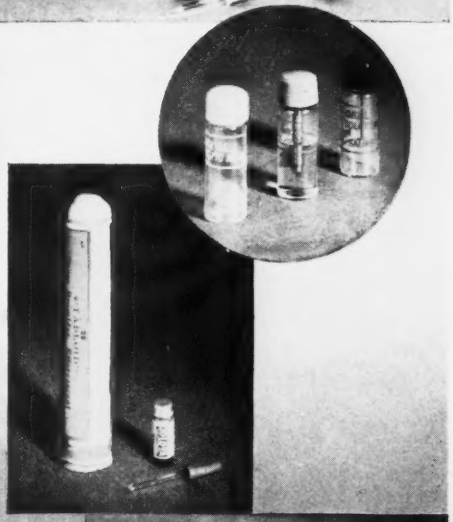

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ALBERT VERLEY, INC., D. A. Bennett, *President,* 1621 Carroll Avenue, Chicago, Illinois
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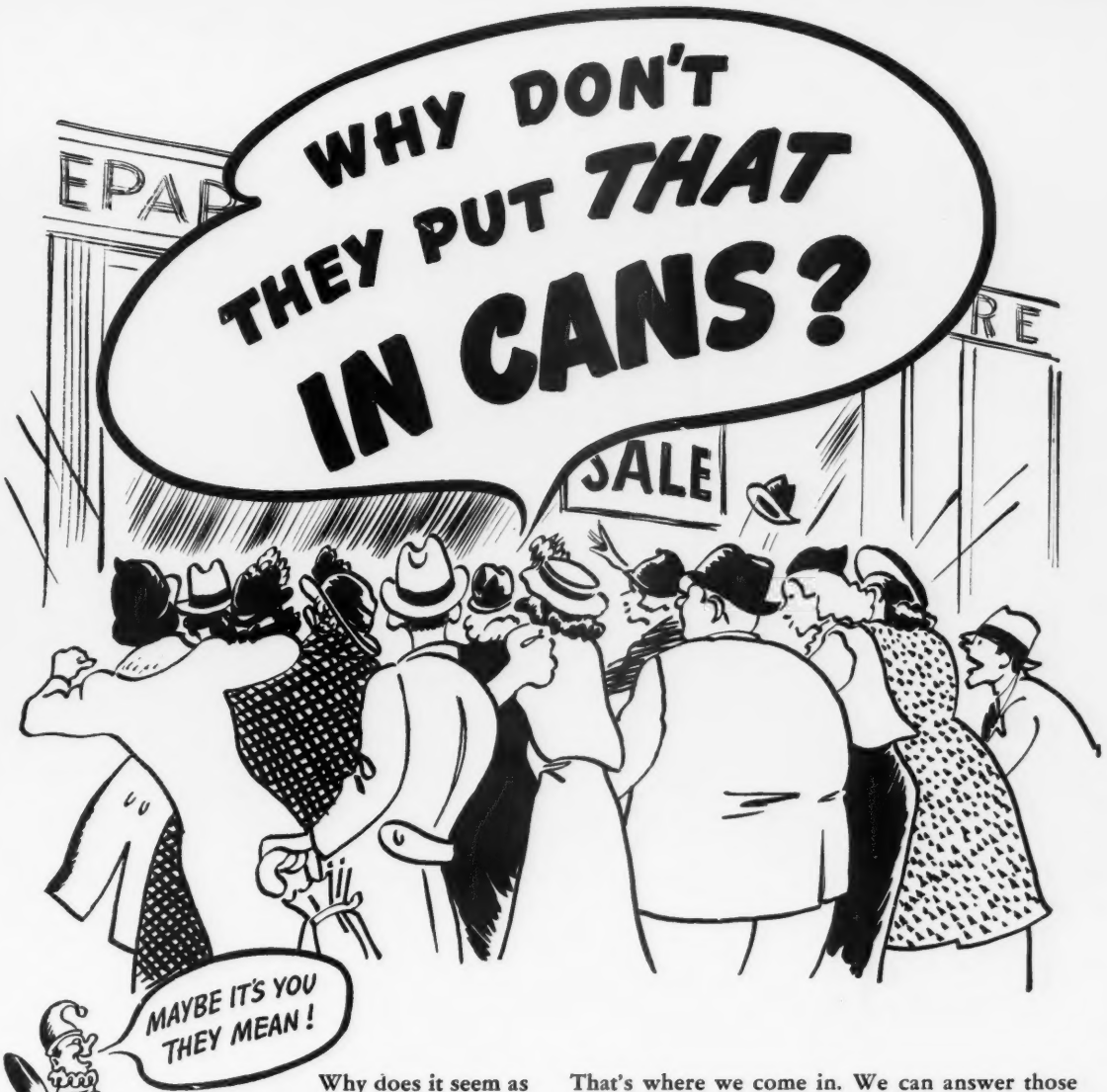

Why does it seem as though you see something new in cans every day? It's partly because our development department and research laboratories have been able to create new economical ways to pack more and more products in tin.

Maybe you've been thinking that a can would be the perfect container for your product. It would cut your shipping costs, cut down your losses on breakage and spoilage. It could be displayed better in the store—BUT—how about the cost—and is the product adaptable to metal packaging?

That's where we come in. We can answer those questions. Our research laboratories and development department are constantly working on such things as new linings, better closures, more convenient shapes, sizes, and the like. Often an entirely new type of container is designed to meet some specific need. Then, again, a simple change in an existing container has been responsible for new sales impetus.

Why not get in touch with our nearest office and let us know what you have in mind. Our complete facilities are available to you, without obligation.

CONTINENTAL CAN COMPANY

NEW YORK · CHICAGO · SAN FRANCISCO · MONTREAL · TORONTO · HAVANA

"MAN-HOURS OF RESEARCH"...

Do you realize how many are spent in the constant improvement of N. Y. Q. products?

Hour after hour — day after day — month after month — research is being carried on in the laboratories of N. Y. Q. for the improvement of our products — to assure highest quality and to control manufacture from raw materials into finished substances. That is why so many satisfied customers have confidence in products carrying the N. Y. Q. label.

MANUFACTURERS OF: Bismuth Subcarbonate..Bismuth Subgallate..Bismuth Subnitrate and other Bismuth Salts..Brucine Alkaloid..Brucine Sulfate..All Salts of Cinchona Alkaloids..Codeine Alkaloid..Codeine Phosphate..Codeine Sulfate..Iodine Resublimed..Iodoform..Menthol-Y..Morphine Alkaloid..Morphine Sulfate..Opium Gum (Gran. and Powd.)..Potassium Iodide (Cryst.—Gran.—Powd.) ..Quinine Sulfate and other Quinine Salts..Strychnine Alkaloid..Strychnine Sulfate..Thymol Iodide..

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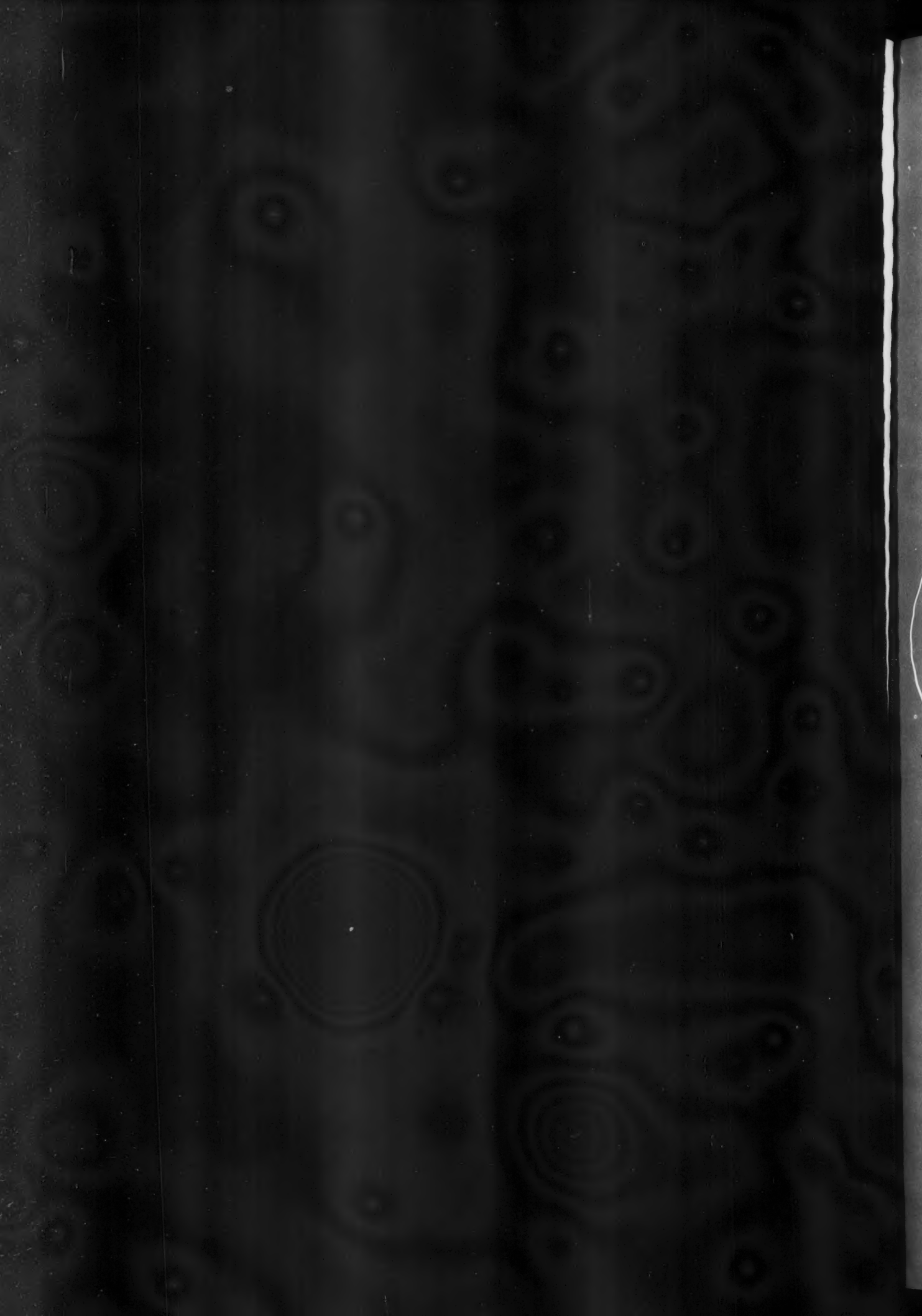
NYQ



Awarded . . . . FIRST PRIZE

FELTON'S

JASMIN SUPREME

In the latest International perfume contest, Jasmin Supreme received the acclaim of all the judges and was unanimously awarded first prize for its marvelous expression of the fragrance of the living flower.

Discriminating perfumers will quickly recognize the exceptional merits of this superlative new Felton creation.

The basic note in Jasmin Supreme is Felton's new specialty

JASRICH

Jasmin Supreme and its various modifications can be compounded economically by using Jasrich as a basic material.

Write for samples and quotations

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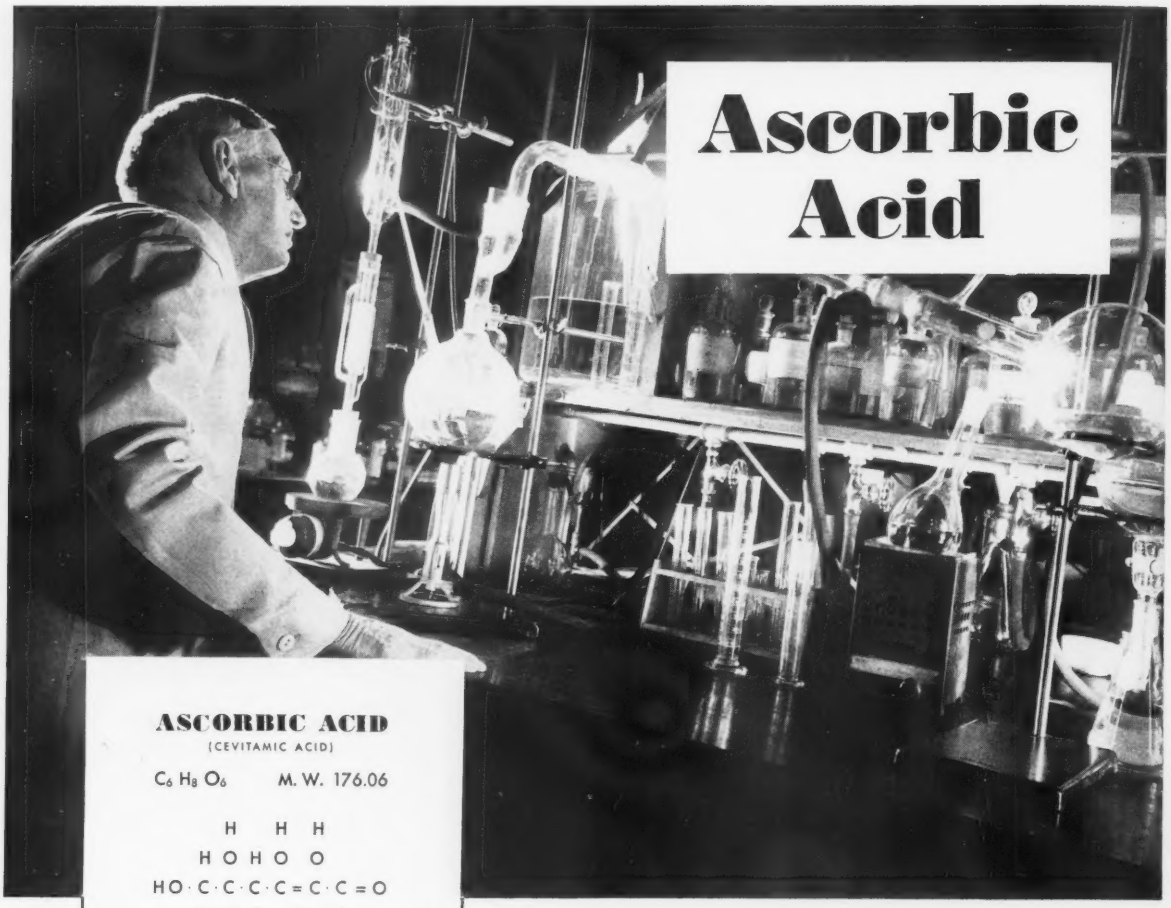
CHEMICAL COMPANY, INC.
603 Johnson Ave. Brooklyn, N. Y.

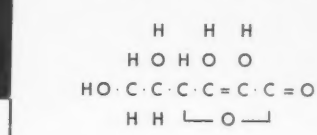
Manufacturers of AROMATIC CHEMICALS, NATURAL DERIVATIVES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS
STOCKS CARRIED IN PRINCIPAL CITIES

IMPORTANT TO THOSE WHO WANT QUALITY



ASCORBIC ACID
(CEVITAMIC ACID)

$C_6H_8O_6$ M. W. 176.06



A product of highest purity.

Meets all the American Medical Association tests for Cevitamic Acid, as published in the current New and Non-Official Remedies.

Dependable!

The manufacture of Pfizer Ascorbic Acid results from independent research, combined with engineering skill and operating efficiency. Our proven process and ample supply of raw materials insure uninterrupted production . . . .

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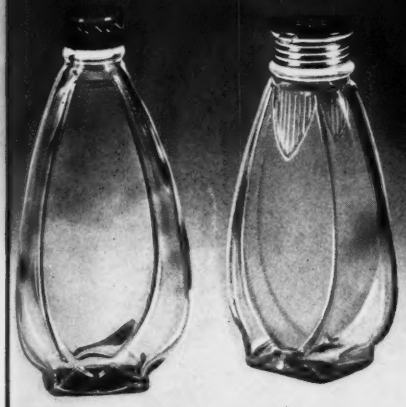
STYLE P107



STYLE 1100

STYLE U1085

STYLE 371

INFORMAL CATALOG PAGES

No. 5 of a series showing the variety of CARR-LOWREY stock bottles suitable for drug, cosmetic and similar products.

STYLE 371—Available in four sizes
DESIGN PATENTS 100,368; 102,859

Capacity	Finish
3 oz.*	400-20 mm.
3 oz. Tapered*	400-20 mm.
4 oz.	410-20 mm.
6 oz. Tapered*	400-43 mm.

STYLE P-107—Available in two sizes

4 oz.*	410-28 mm.
8 oz.*	410-28 mm.

STYLE 1100—Available in two sizes
DESIGN PATENTS 67,807; 67,808

4 oz. Talc	Small Klik-Tite
5½ oz.*	400-22 mm.

STYLE 355—Available in four sizes
DESIGN PATENT 93,116

Capacity	Finish
2 dr.	425-8 mm.
4 dr.	425-13 mm.
1 oz.	425-15 mm.
2 oz.	425-15 mm.

STYLE U-1085—Available in two sizes

4 oz.	410-18 mm.
5 oz.	415-18 mm.

STYLE 393—Available in two sizes

1 oz.*	400-28 mm.
2 oz.*	400-33 mm.

*Not regularly carried in stock; ask us for quotations. Sizes illustrated are underlined.

CARR-LOWREY Glass Co.

FACTORY AND MAIN OFFICE: BALTIMORE, MARYLAND

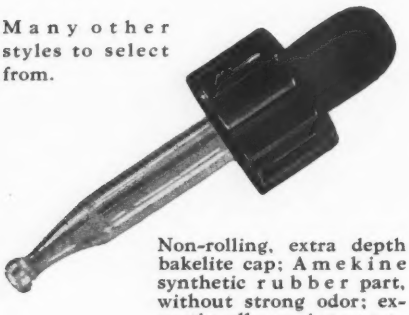
NEW YORK OFFICE: 500 Fifth Avenue, Phone: Chickering 4-0592
CHICAGO OFFICE: 1502 Merchandise Mart, Phone: WHitehall 4326

This series of informal catalog pages is being published to facilitate your selection of the right stock bottle for your particular need. We suggest you file this page for future reference.

New sizes are constantly being added to our line. If you want a size not listed for any style illustrated, ask us for price quotation on your requirements.

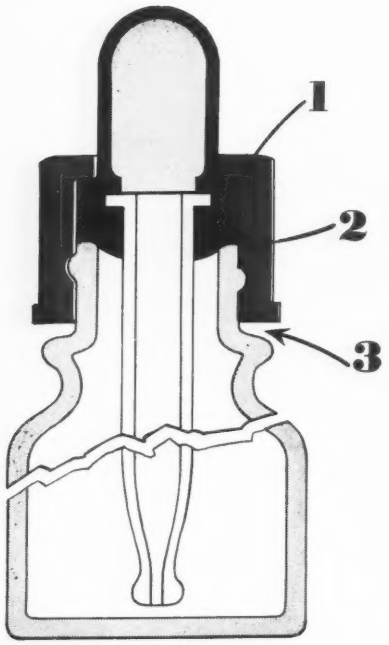
Why NEW PERFECTION Dropping Parts

Many other styles to select from.



Non-rolling, extra depth bakelite cap; Amekine synthetic rubber part, without strong odor; exceptionally resistant to oil; Saftee-Ball glass.

- √ Are Tight
- √ Stay Tight
- √ Don't Wobble or come loose
- √ Insure perfect Closure of Bottle when not in use



Cross-section of a NEW PERFECTION dropping outfit.

Rubber parts that are clean and of the proper consistency, that fit snugly in the cap, do not revolve or wobble, and with the proper groove to hold the glass tightly in place, even when moist (this is of especial importance with oily fluids).

A slight downward turn of the screw cap compresses the thick flange vertically and expands it laterally, assuring an absolutely tight closure.

Flanges are of correct thickness to give proper clearance between bottom of cap and ring on neck of bottle. This prevents breakage of both cap and bottle.

Note: Complete dropper fitment is perfectly balanced so that, when laid down, glass does not come in contact with surface.

Bottles of new patented design in 6 sizes, (2 cc., 1/8, 1/4, 1/2, 1 and 2 oz. capacity), in 4 colors, (golden amber, royal blue, emerald green and crystal clear), of the very highest quality, individually inspected and cleanly packed, equipped with practically any style of cap, rubber part or dropper glass. This enables you to have a distinctive package without mold expense.

A request on your letterhead will bring you samples. Let us know your requirements.

PENNSYLVANIA GLASS PRODUCTS CO.

410-412 N. CRAIG ST. PITTSBURGH, PA., U.S.A.

Scientifically designed, heavy, combination bulb and extra-thick flange is one of the reasons for the superiority of NEW PERFECTION.

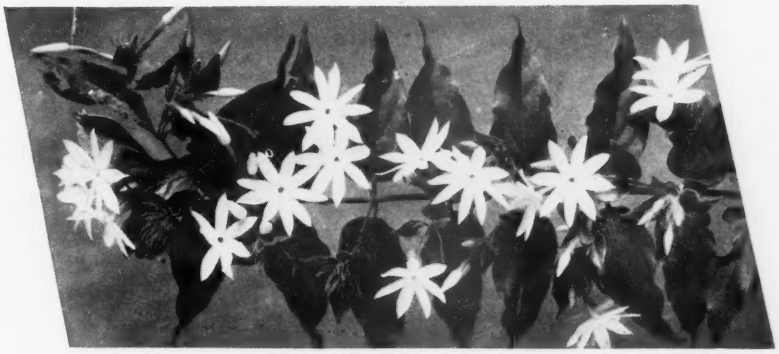
Patented in United States, Canada, Great Britain and other countries.

Improved New Shape Bottle !

The New Modernistic

The "New Perfection" dropper bottle now offers a distinctive new feature, a slightly concave back, to make the bottle lie flat, face up, for greater speed in labeling. Front is designed to provide largest possible label space, so important with such small bottles.

We can supply you with a distinctive package without your going to mold expense, completely assembled, in four colors of glass, Amber, Blue, Clear or Green, in six sizes, 2 cc., 1-8, ¼, ½, 1 and 2 ounces.



"IT'S BETHLEHEM FOR STEEL"
"IT'S SCHIMMEL FOR JASMINE"

In the Schimmel line there is a right Jasmine for every product and purpose. And they all show how our persistent research over many years has brought us closer and closer to reproducing the natural Jasmine odor. Here are three important Jasmine specialties that you should know.

Jasmine 1000 is a reproduction of the absolute which contains all the odoriferous constituents of the fresh flower. It can be used either with the absolute or in its place on a pound for pound basis.

Osmodor Jasmonta is a basic Jasmine of great strength which gives a very natural effect. It incorporates our Iso-Jasmon. It can be combined with Jasmine or used to round out floral or fancy bouquets. Its perfect floral character will add distinction to the composition.

Jasmine W. K. 3084 is an unusually powerful floral compound which gives the fresh effect of the newly picked garden Jasmine. It also has unlimited possibilities in modern compositions and floral bouquets.

You can prove for yourself whether our reputation in the Jasmine field is justified. Send for samples and test them out.

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(All indelible shades—
consistencies a la mode)

EYE SHADOWS . . . EYEBROW PENCILS

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Do not confuse these powder puffs with so-called sterilized puffs. Sterilization is only a temporary condition, ineffective with the first use of the puff.

ASEPTIPUFS are permanently antiseptic because our velours and wools are treated with antiseptics when manufactured. The puffs remain antiseptic throughout its life, or until washed. The inhibitory action is constant—*always* on the job battling Bacteria, protecting the reputation of your cosmetics. WRITE TODAY for literature and samples.

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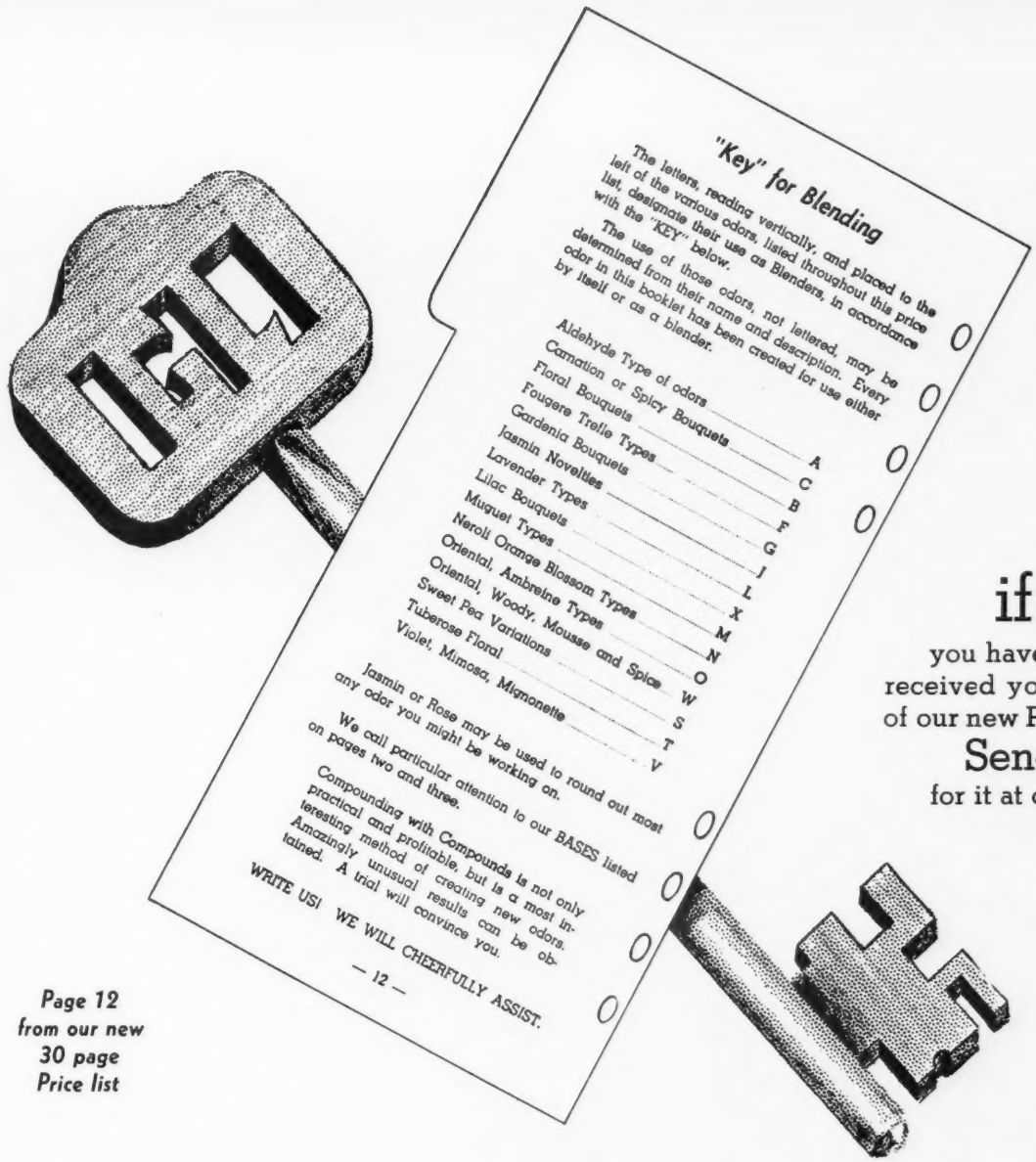
"Key" for Blending
The letters, reading vertically, and placed to the left of the various odors, listed throughout this price list, designate their use as Blenders, in accordance with the "KEY" below.
The use of those odors, not lettered, may be determined from their name and description. Every odor in this booklet has been created for use either by itself or as a blender.
Aldehyde Type of odors
Carnation or Spicy Bouquets A
Floral Bouquets C
Fougere Trefle Types B
Gardenia Bouquets F
Jasmin Novelties G
Lavender Types J
Lilac Bouquets L
Muguet Types X
Neroli Orange Blossom Types M
Oriental, Ambreine Types N
Oriental, Woody, Mousse and Spice O
Sweet Pea Variations W
Tuberose Floral S
Violet, Mimosa, Mignonette T
V
Jasmin or Rose may be used to round out most any odor you might be working on.
We call particular attention to our BASES listed on pages two and three.
Compounding with Compounds is not only practical and profitable, but is a most interesting method of creating new odors. Amazingly unusual results can be obtained. A trial will convince you.
WRITE US! WE WILL CHEERFULLY ASSIST.
— 12 —

Page 12 from our new 30 page Price list

if
you have not
received your copy
of our new Price List
Send
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The "Key"

To successful blending of successful odors——
A thirty page listing of "Blended Perfume Oils,
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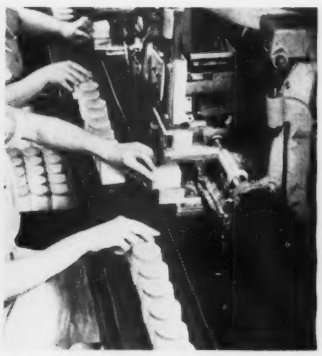

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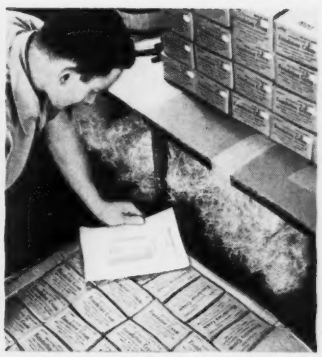

No delay in deliveries! Allied ships *on time. Our plant, containing* a U. S. post office and express agency, *is near principal markets.* Combination shipments save money.

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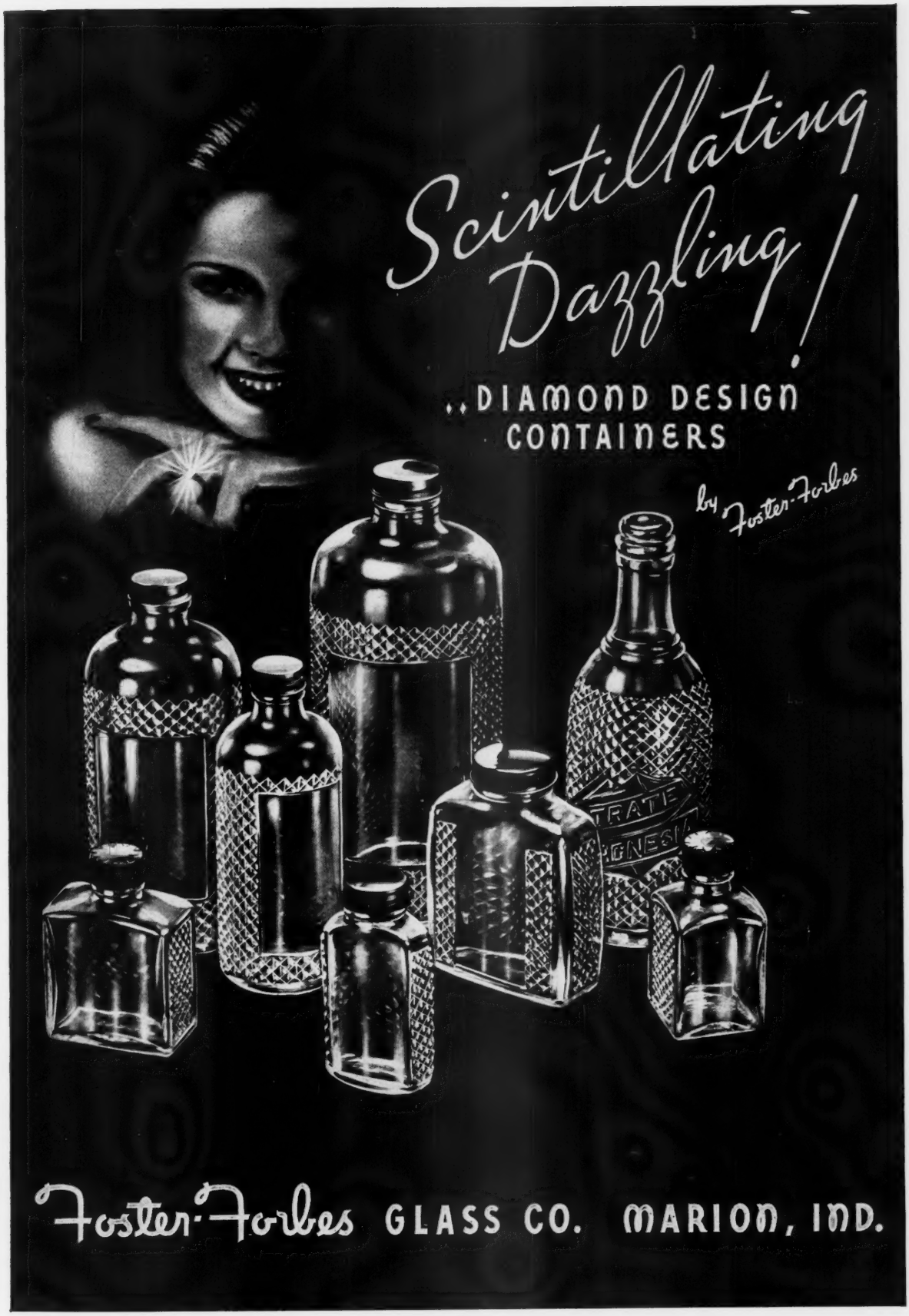
Scintillating Dazzling!
..DIAMOND DESIGN CONTAINERS
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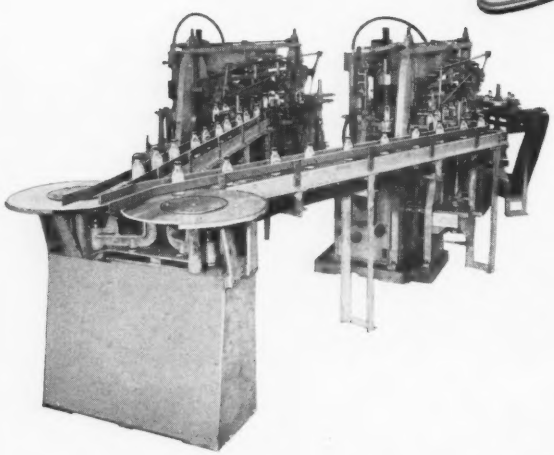
Foster-Forbes GLASS CO. MARION, IND.

Prize Winner

One of the fully automatic Labelrites at the Norwich Pharmacal Company plant. The view taken during test run prior to installation, showing ejection end of the unit.



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Machinery and Equipment
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ALL-AMERICA AWARDS

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Perfect register;
no bottle wiping;
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Marylis ... *the most recent odor development of the Givaudan Laboratories, is a new and more powerful base of the Muguet family. Use it to endow your extracts, creams and lotions with a more flowery effect... and a truly arresting originality. We will be glad to supply samples on request.*

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BERGAMOT SYNTHETIC EXTRA FINE possesses the floweriness and strength of the natural oil. In most cases it can be used to replace the natural oil completely without sacrifice of quality. In those cases, where the original must be used, a 50% substitution of this new laboratory product will give entirely satisfactory results.

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A PLACE IN THE DRUG PICTURE

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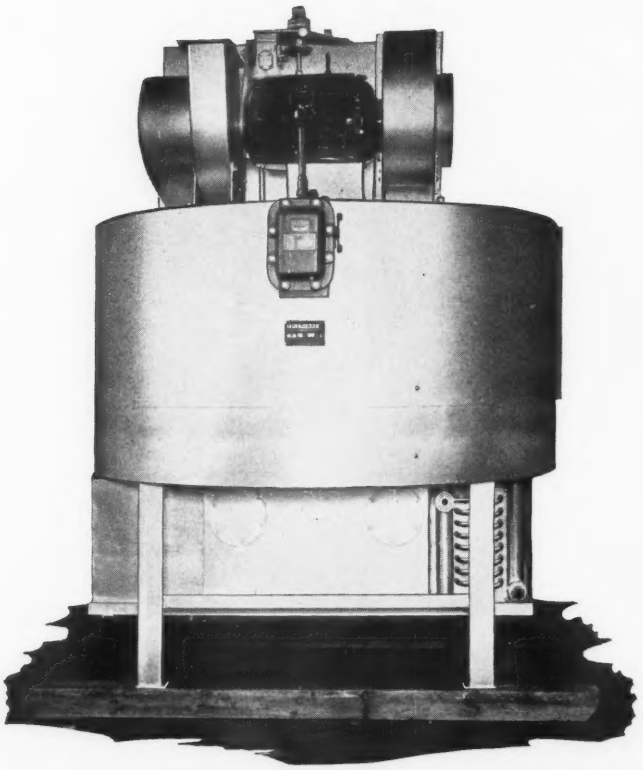
COMPLETE PACKAGES

For best and surest results use Anchor Caps with Anchor Hocking containers. On the bottles above we show Anchor Improved C. T. Caps . . . but of course Anchor makes a wide range of styles for all products and purposes, metal or molded, decorated or plain.

ANCHOR HOCKING GLASS CAPS
-an unbeatable combination

HUMID SUMMER WEATHER IS COMING

GET WINTER DRYNESS ON HUMID SUMMER DAYS



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FOR COSMETICS OF

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American Cyanamid & Chemical Corporation

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*Registered U. S. Patent Office. †Trade-mark of American Cyanamid & Chemical Corporation applied to wetting agents of its own manufacture.

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by

FRANCIS CHILSON

Chemist, factory manager, perfumer, owner—anyone interested in Cosmetics will find "Modern Cosmetics" a valuable help in business. It is a technical book, filled with formulas, procedure, manufacturing practices, yet so clearly and simply written that even one not connected with the industry can understand its text.

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on less than $1,000,000

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Toilet Requisites

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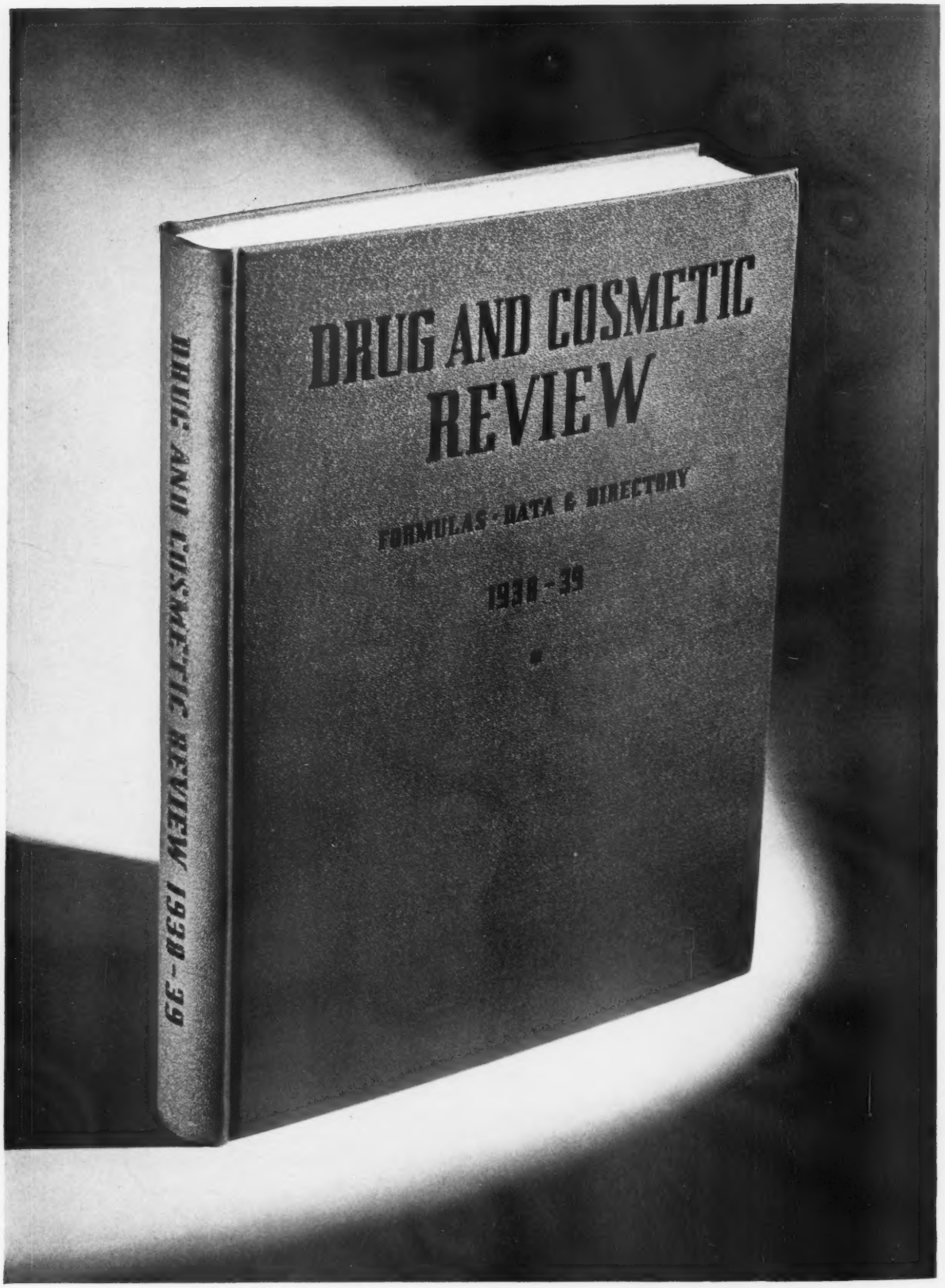
CANCO AMERICAN CAN COMPANY, 230 PARK AVENUE, NEW YORK, N. Y.


DRUG AND COSMETIC REVIEW
FORMULAS · DATA & DIRECTORY
1938 - 39
DRUG AND COSMETIC REVIEW 1938-39

In Constant Use by

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During the 16 months since the Fourth Edition of The Drug and Cosmetic Review was published, this complete reference book, catalog and directory has found its way to the desk of thousands of individuals who purchase or influence the purchase of the materials, machinery and packages used in making drugs, cosmetics and allied products.

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DRUG AND COSMETIC INDUSTRY

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Can you afford to take the chance?

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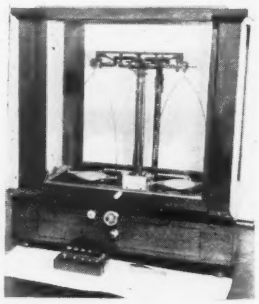
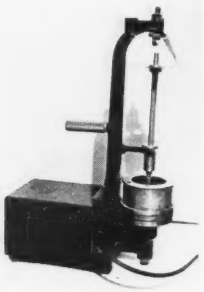


Where production is standardized, where viscosity is kept accurate with the precision of a watch.



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Lacquer is aged

Facilities for filtering all

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ARE OF THE LATEST AND MOST MODERN TYPE.

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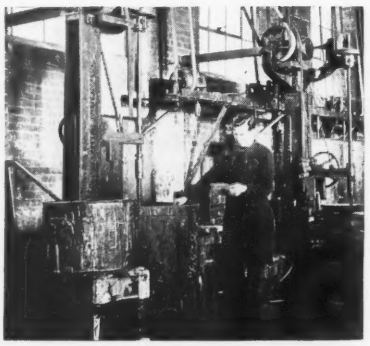

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is particularly accurate—triple checked in the laboratory, in the factory and by expert women for final approval.

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is packed and shipped in high grade tin cans, or tin-lined drums, which is the only safe method of handling and keeping Nail Enamel.

Service with sincerity in all its applications.

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Radiance Lipstick is non-greasy, non-toxic, and does not dull or "sweat" with age or exposure. Like all HELFRICH exclusively private brand cosmetics, *Radiance* Lipstick is manufactured in conformance with the existing regulations of the Federal Food, Drug, and Cosmetics Act. Write or wire *today* for samples.

We make private brands exclusively. We do not compete with those we serve.

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F. T. C. vs. F. D. A.

THOSE who predicted that the giving to the Federal Trade Commission of power to control advertising and deceptive acts and practices in the interest of the consumer would result in an unsatisfactory state of dual enforcement probably did not know how right they were. The Federal Trade Commission is very definitely stepping over into the field of the Food and Drug Administration. We have seen the Commission jump the gun on the FDA by obtaining injunctions against products dangerous to health. Now we see the Commission order the manufacturer of a long established proprietary to change the name of his product.

THIS latest step by the Commission claims that Dr. Caldwell's Syrup Pepsin is not properly named and prohibits "use of the word pepsin alone or in association with other words to describe a preparation not containing sufficient pepsin, as an active ingredient, to possess substantial therapeutic value because of the pepsin content."

FROM these developments it certainly appears as though the Federal Trade Commission is entering into keen competition with the FDA to prove that it can use its powers more effectively than the FDA can use its powers. We do not expect to see the FDA lie down in the face of such competition so we anticipate rather fierce enforcement on both sides with the manufacturers being squeezed in the middle.

WE DO not believe that Congress anticipated that the Commission would attempt to control products dangerous to health under the Wheeler-Lea Act as this power was specifically given to the FDA in the Food, Drug, and Cosmetic Act. We hope that before long these overlapping powers will be clarified by the courts or by amendments to the laws.

ENFORCEMENT

From all appearances, competition has arisen between the F. T. C. and the F. D. A. as to which body should more effectively control manufacturers of

With the Federal Trade Commission apparently stepping over into the field of the Food and Drug Administration, the results of this competition between the two regulatory bodies of the Government are beginning to make their appearance. It will be recalled that the Commission obtained an injunction against the manufacturer of a dangerous weight reducing compound restraining the manufacturer from advertising his product until the Commission had given its decision as to the truth or falsity of the advertising. During the past month the Commission obtained a similar injunction against the manufacturer of Alcoban, a product offered as a cure for the liquor habit which the Commission says contains injurious ingredients.

In last month's issue, our Washington correspondent forecast this action against Alcoban in an article which told what type of products were to be attacked by the Commission under the injunction form of action. Because of important subsequent developments following the publication of this article, we repeat the list of products to be attacked:

"(1) drug compound alleging to be a cure for the liquor habit which contains injurious ingredients; (2) injurious hair dye; (3) saline laxatives represented as overcoming excess acidity; (4) dentifrices represented as beneficial because they contain milk of magnesia; (5) so-called diabetes remedies containing bromides in harmful quantities; (6) nail polish removers alleged to benefit the nails because containing olive oil; (7) facial creams represented as skin foods; (8) drug preparations containing acetanilide and other ingredients that may be injurious; (9) distilled herbs represented as effective and safe for treatment of chills and fever; (10) drug compounds containing strychnine and nux vomica represented as safe and effective tonic health building agent, (11) devices and medicines represented as effective cure for hernia; (12) devices represented as beneficial in the treatment of prostrate gland troubles; (15) contraceptive jellies and devices alleged to be safe and effective."

It will be noted that the first action forecast has been taken against Alcoban. But it will also be noted that apparently the FDA read the article and decided to jump the gun on the Commission because they took sudden action against Bromo-Seltzer, B-C Headache Powders, and Stanback Headache Powders, all of which contain acetanilid and bromides and were clearly products on the list of things to be done by the FTC. Under the new law the FDA has for the first time the power to remove from the market products which are dangerous to health. Doubtless FDA officials were extremely pleased to receive this power in the new law. But they are waking up to find that the agile FTC is also claiming to have this power under the Wheeler-Lea Act and that the FTC is going ahead using it without regard for the powers which Congress gave the FDA. The difference between the powers that the FTC are using and that given to the FDA is that the FTC can only stop the advertising and merchandising efforts in behalf of a product advertised in such a manner as to be dangerous, while the FDA can actually ban the product itself from the market.

Of course these actions by the FTC must be very embarrassing to the FDA. Surely the weight reducing compound containing dinitrocresol should have been spotted by the FDA since the FDA has already issued a ban against this sort of product. Apparently there is no cooperation between the two enforcement bodies and

COMPETITION

drug products. Where this will lead does not appear pleasant, but the situation exists and something must be done about it.

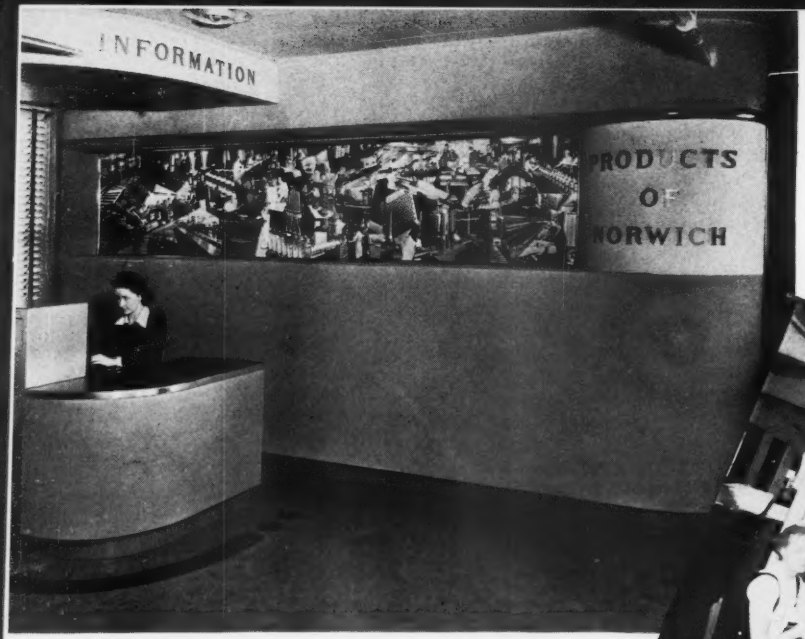
the FTC is going to steal all the glory it can from the FDA. Certainly the FDA will not stand by and see the FTC step into its field of activity and make it appear that the FDA is not enforcing the new law. Clear evidence of the FDA's intention to attempt to thwart the activities of the FTC is seen in the Bromo-Seltzer, B-C, and Stankack cases. The suddenness of the action taken against these products is understandable when the competition between the two enforcement agencies is appreciated.

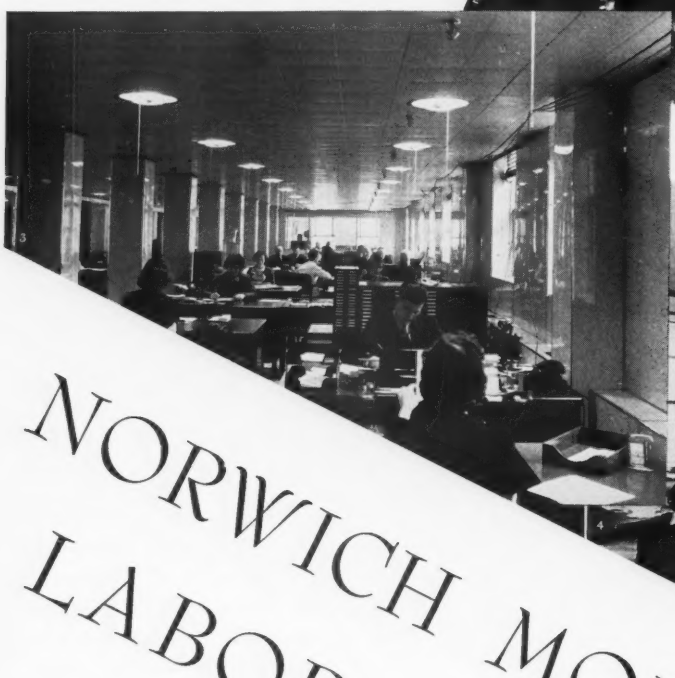
Competitive enforcement of the laws controlling this industry is apt to grow worse instead of better if some governmental action of some sort is not taken for the reason that the FTC is now a consumer-minded body as the result of the Wheeler-Lea Act. The FTC probably can see no reason why it should not enter into competition with the FDA in a real effort to get the entire control of foods, drugs, and cosmetics away from the FDA. After all, there was never any logical reason why control of foods and drugs should be in the Department of Agriculture. The FTC demonstrated its ability to lobby in competition with the FDA when it was successful in having the Wheeler-Lea Bill enacted into law at a time when the FDA could not bring about passage of the Food, Drug, and Cosmetic Act.

At a time when manufacturers in this industry are frantically trying to get their products into conformity with the new act which becomes fully effective on June 25, the FTC bears down heavily on the products of the industry and thus forces the FDA to enforce those parts of the new which are effective, in a most stringent manner. Thus is proven the contention that we made in February 1937 that the FTC was no better for this industry than the FDA. We have always contended that there is no choice between these two enforcement agencies, give either of them power and watch them use it.

There must be some method of getting rid of this disastrous enforcement competition which is resulting in dual enforcement. Steps must be taken by the industry to bring about some sort of Congressional action which will limit the powers of one or the other so that the industry will know where it stands. We imagine that the FTC has the thing worked out in its own mind figuring that the course that the industry can take to get rid of this disastrous condition is to recommend that the entire power be given to one body. Furthermore, the FTC probably figures that since there is no logical reason why the control of foods, drugs, and cosmetics should be in Agriculture. And then again the FTC always has had control of advertising as a means of unfair competition and was the first body to act against false advertising, and they probably would assume that if the FDA got control of advertising in the interest of the consumer, the FTC could still annoy the manufacturers under the unfair competition control.

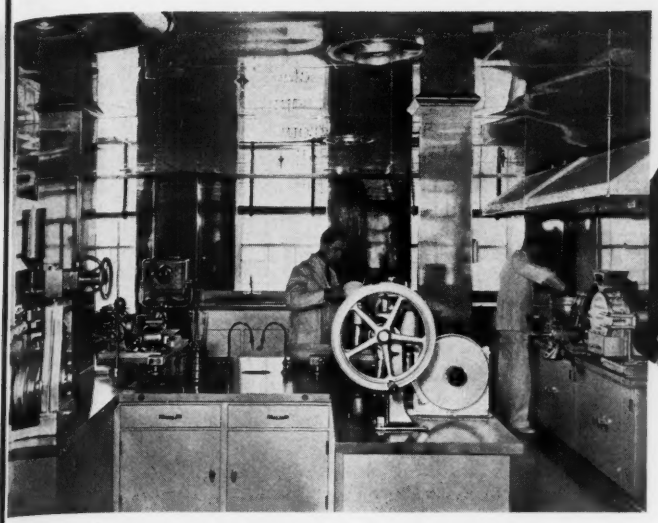
But it is vital to the interest of this industry that a movement be inaugurated to limit the FTC and stop it from encroaching upon the duties of the FDA. This industry, already groaning under regulatory measures cannot serve the medical profession or the public if it is to be hampered in a manner far beyond that intended by Congress. Certainly it is not the intention of Congress that two enforcement bodies should enter into rather reckless competition for power to the end that a necessary industry will be unduly restricted if not destroyed.





NORWICH MODERNIZES LABORATORIES AND OFFICES

By FRANCIS CHILSON
Industrial Consultant

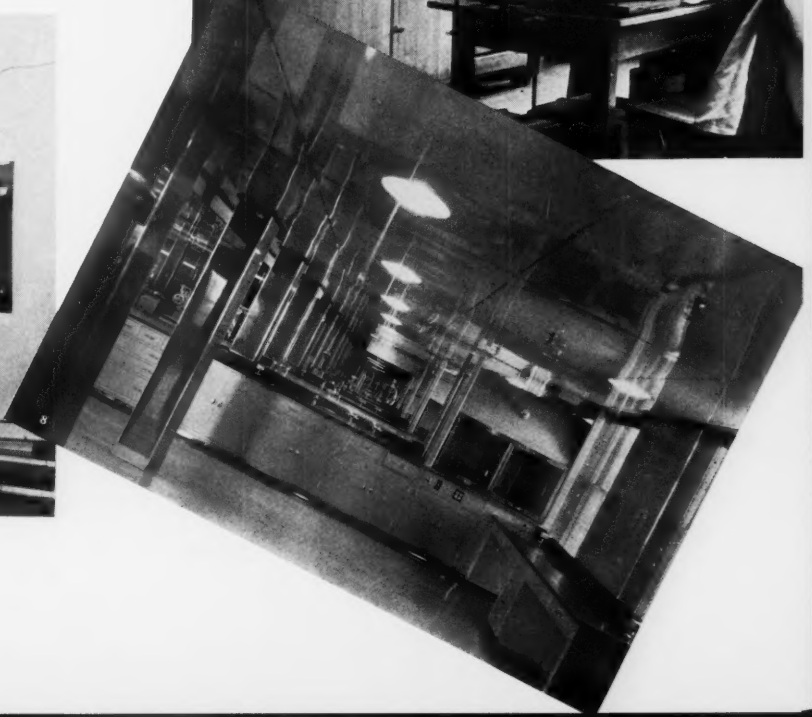


ONE advantage of the plant modernization program which was undertaken at Norwich about four years ago was that, through the consolidation of duplicated departments, space was made available for new and larger laboratories and general offices, for which there was at that time a recognized need. Had not the modernization program been undertaken, it would have been necessary to secure this space by constructing a large new building.

The manner in which the interior of three old mill-type buildings was converted into well lighted, well ventilated areas that are as clean-cut and as modern in aspect as they would have been had a new building been erected is an interesting study in the application of modern interior finishes and attractive equipment. Moreover, the Norwich laboratory strikes a new note in laboratory design; it is virtually free from partitions; it is colorful, clean, efficient, and odor free.

The space for the laboratories, general offices, and employee service departments was made available as indicated in a group of three buildings located im-

At the upper left corner of the opposite page is shown the new reception room at Norwich. On that page also is shown a view of the office before modernization and two views of the office after modernization. On this page above are shown a view of the new pilot plant and a view of the old pilot plant. Below are shown a view of the old laboratory and a view of the new laboratory. At the lower left is shown the recreation lounge for women employees.



mediately adjacent to the administration building and connected with it by means of a bridge. These buildings are built roughly in the form of a U. The first floor of the three buildings is utilized for employee service departments; such as, locker rooms for men and women, first aid, lunch and recreation halls, employee store, etc. In addition, a small part of the area is devoted to a centralized reception room.

The second floor of the three buildings is used for the general offices, factory offices, filing departments, and similar functions. The third floor of the three buildings is used for the laboratories. The remaining floors are used for the storage of office supplies, laboratory supplies, and certain items of packaging materials which are used in adjacent manufacturing buildings.

In order to make the three buildings accessible from a common entrance, the old wooden staircases were ripped out and a fireproof stair tower was built in the angle formed by two of the buildings. Through this common entrance access is provided to all floors of the three buildings. To comply with fire regulations, a second broad fireproof staircase was installed in a corner of one of the buildings at the extreme end of the group.

The laboratory formerly occupied part of one floor in one of these buildings and part of another. That the laboratories were badly conjested, poorly lighted, and poorly ventilated can be visualized by any chemist who, during the course of thirty years, has seen a laboratory grow from a small beginning with one man to a very large organization employing a numerous staff of men and women.

In order to conceal old brickwork, wooden pillars, and supporting beams, the interior of the laboratories and offices are finished with chromium-trimmed, green Marlite. This is a synthetic sheet material having a highly lustrous surface resembling tile. Marlite was used to enclose walls and window sills and it was used also to conceal the wooden pillars which are spaced on very close centers. Buff-colored acoustical ceilings were installed and all lighting, ventilating, and sprinkler fixtures were fitted flush with the ceilings. A new type of lighting fixture was installed so that the lighting of laboratory and office areas is perfect and free from shadows. It may be interesting to observe that this is the first commercial installation of this particular type of lighting fixture.

New floors were installed throughout; that of the laboratory being wood and that of the office rubber tiling. Forced ventilation from a common source is provided throughout all areas. The equipment used for this purpose is standard air conditioning equipment and provision has been made for cooling when necessary.

Before the job was undertaken, fear had been expressed that because the headroom under the beams is only eight feet, the installation of a flush ceiling would make the area appear to be uncomfortably low. When the ceiling had been installed, however, the effect was just the opposite; the area looks higher now than it did when the wooden beams were exposed.

As mentioned, the laboratories occupy the entire space on the third floor of the three buildings which are built together as a unit and connected by means of fire doors. The buildings are arranged somewhat in the form of a U with the smallest of the group located near the administration building. This small leg of the U is used for the private offices and conference rooms of laboratory executives. It is also used for laboratory clerks. Building Two, which is the next unit in the group, is used for research, control, and bacteriological laboratories. Building Three is used for pharmacological laboratory, animal clinics, rat laboratories, and also for general laboratory services such as washing, glassware storage, etc.

Among the unusual features of this laboratory, in addition to an absence of partitions, are: Each chemist has his own fume hood. Every two chemists are provided with a microscope and a balance. Each chemist has his own desk and files. With the exception of titration benches which are located along the walls, no high cabinets or other equipment are in evidence. The laboratory benches are not equipped with overhead shelves. No peg boards or other unsightly superstructures are permitted above the tables. Reagent bottles are stored in convenient racks instead of on shelves. Laboratory materials are kept in bench cabinets. The supporting pillars of the area are built into the benches and thus are not in evidence. Because there are with one small exception no partitions, the laboratory director can from any point in the laboratory see what is going on in every division.

The laboratory area is divided into two sections by means of a central aisle. Located on one side of this aisle are the laboratory units which are devoted to the control of raw materials, finished products, and packaging materials. On the opposite side of the aisle are the research units, pharmaceutical laboratories, pilot plant, and the bacteriological laboratory. The reading room and library are located at one end of the laboratory area.

There is an almost total absence of partitions in the laboratory, the exception being the partition used to enclose the bacteriological laboratory. This could not be eliminated because the air within this laboratory is carefully filtered and sterilized by means of sterilizing lamps.

The layout consists of a series of U-shaped laboratory units. Each unit constitutes a two-man laboratory and the units are separated from each other by means of low plate glass dividers which are supported at one end by the fume hoods and at the other by the columns which, incidentally, are built into the laboratory tables. These plate glass dividers are sufficient to provide privacy without interfering with supervision. The use of such units and the absence of partitions makes the entire laboratory area very flexible so that it can be adapted to meet the changing needs of the business. Since every chemist has his own fume hood and since the entire area is extremely well ventilated, the absence of partitions does not complicate the problem of fume control.

The laboratory furniture consists of standard steel units finished in aluminum and trimmed with stainless steel and chromium. The table tops are made of grey stone. Every laboratory unit consists of two work benches, one for each chemist. Between these benches there is a common work bench for both men. At the end of each laboratory unit, forming the base of the U-shaped unit, there are tables for microscopes and balances and desks for the chemists.

In designing the laboratory we made an effort to maintain a common working level throughout and to eliminate all high structures such as wall cabinets, peg boards, overhead shelving, etc. As mentioned above, unsightly reagent bottles which so commonly clutter up laboratory shelves are kept in specially designed racks holding about thirty bottles each. When not in use, these racks are kept in drawers. At the start of operations in the morning a rack containing the most commonly used reagents is placed on the center work bench where it is accessible to both chemists. It is worthy of comment that the racks make the reagent bottles more readily accessible than they are when stored on shelves.

In each laboratory unit there are two fume hoods, one for each chemist. In these fume hoods bunsen burners, water baths, and all odor making equipment is housed. The hoods are mechanically ventilated and are provided with indicators so that the chemist can always tell when the individual fans are in operation. By providing an individual fume hood for each chemist in contrast with the usual practice of centralizing the fume hoods, we were able to save a considerable amount of walking time and at the same time make it possible to control fumes and odors more thoroughly. All fume hoods are provided with the necessary services such as air, steam, gas, water, electricity, etc. The same services are provided for the side work benches and also for the center benches.

Since chemists occasionally use equipment which could not economically be duplicated for each laboratory unit, all such equipment, as for instance dehydrating ovens, polariscopes, etc., is located on the ends of the laboratory tables along the main aisle so that it can be used by any chemist requiring it without causing him to enter one of the laboratory units.

Although the pilot plant is comparatively small, it is extremely well equipped to duplicate on a small scale every conceivable type of operation normally followed in a pharmaceutical plant. This laboratory is provided with mixers, mills, kettles, stills, fractionating apparatus, dryers, tablet making equipment, and also hot and cold closets for observation samples.

In the adjacent building but on the same floor pharmacological and animal laboratories are located. A large part of this area is devoted to an air conditioned rat laboratory in which thousands of rats are kept in sanitary cages. The pharmacological laboratory is equipped for vitamin, biological, and pharmacological work and is finished to harmonize with the remainder of the laboratory. In this general area also are located a centralized washing room, a storage room for supplies and apparatus, a dark room, and cage rooms for observation animals.

Below the laboratories on the second floor of the same group of buildings the new general offices are located. In addition to the general offices the second floor is devoted to factory offices, mailing and filing department, file storage, and special sales offices.

The bridge which connects the general office with the administration building forms a convenient means of contact between company officials and the general office.

Like the laboratory on the floor above, the general office consists of one large open area. The only partitions employed in the layout are those surrounding the private office and conference room of the treasurer, Mr. J. K. Hill. The floor of the general office is covered with two-tone green rubber tile and the walls, columns, and brickwork are as mentioned above finished in lustrous cream Marlite trimmed with chromium. An acoustical ceiling absorbs the noise of office equipment. All office furniture is made of steel finished in green to harmonize with floor and wall treatments. The ceiling, it may be mentioned, is finished in white as a contrast to the cream side walls.

In the adjacent building are located the factory offices and central filing and mailing departments. The arrangement of the general office was designed to eliminate inefficient handling of paper work. From the mailing department through all the various office departments in order paper work flows in a straight line.

The first floor of the group of buildings is devoted to the reception room and to centralized employee service departments. This area provides all the usual facilities for employee services.

The difference between the old laboratories and offices and the new ones can be appreciated fully only by those who have seen both. The modernization of the laboratories and offices is on a par with the work that was done in modernizing the plant which made it one of the cleanest, most efficient plants in the industry.

NEW PERMANENT INK

A new ink is now available for writing on glass or enameled ware. It is available in white or black, and is known as "S.R.L." brand LN glass ink. In using the ink, it is merely necessary to apply it with any steel pen, writing pen, or fine brush. The permanency is increased by gently warming the writing. Unlike diamond ink, which has been on the market for many years for etching glass, this new ink is non-corrosive, and therefore can be kept in glass bottles rather than in wax containers. Another advantage, lies in the fact that it is non-corrosive and non-inflammable.

ENDOCRINE COMPOUNDS

THE ADRENAL GLANDS (Concluded)

The Adrenal Cortex

By A. RICHARD BLISS, Jr.

THE fact that removal of both, whole adrenal glands from an animal is invariably followed by death within several days, while destruction of both medullas, with a fairly large proportion of functioning cortical tissue left, is not fatal, is in itself no proof that the adrenal cortex elaborates an endocrine compound. Delayed but rapidly increasing asthenia constitutes one of the most striking and characteristic phenomena following the extirpation of both adrenal glands in the laboratory animal. During the first few days after the operation, the animal usually shows no ill effects, except some loss of appetite, but during the last day preceding death, or even earlier, the animal becomes quiet and stupid, shows weakness and uncertainty of movement in the hind legs, a fall in body temperature, and increasing weakness and apathy. The animal tires on the least exertion, the hind legs become stiff, and there is profound prostration. This is followed by marked dyspnoea, cardiac weakness, and death. Convulsions are common in the rabbit, but do not usually occur in the dog and cat. The rat appears to be more resistant to double adrenalectomy, probably due to the fact that accessory cortical bodies are more frequently found in this animal. It is difficult to compare satisfactorily the results of all the reported laboratory experimentation, due largely to the marked variation in the mortality rates obtained in different laboratories, and to the fact that the age at operation is an important determining influence. The chronic effects are demonstrated more satisfactorily in the rat. These animals show impaired growth, poor deposition of fat, delayed involution of the thymus gland, an increase in weight of the secondary sex organs, and, at times, degeneration of the second convoluted tubules of the kidney.

Some time before the animal dies, the blood urea and non-protein nitrogen rise, while the blood glucose falls; the inorganic phosphate of the blood plasma gradually increases, while the carbon dioxide capacity diminishes; the sodium content of the blood shows a marked fall, attended by a lesser fall of chloride, while the potassium and magnesium contents increase.

Science is indebted to Stewart and Rogoff, Hartman and collaborators, and Swingle and Pfiffner for the evidence that the adrenal cortex elaborates an internal secretion, as well as for the preparation of concentrated extracts of the same. It was recognized by these workers that the only acceptable biological proof for the presence of the endocrine principle was the prolongation of the life of an adrenalectomized animal by injections of an active extract. With fine surgical technic, both adrenals were removed in a two-stage operation, these investigators demonstrated that it was possible to prolong the lives of adrenalectomized animals. Incidentally, it was observed that such animals frequently developed gastric and duodenal ulcers.

Stewart and Rogoff prepared their concentrate by extracting adrenal glands with an excess of 0.9% saline containing a small amount of glycerin, followed by the addition of alcohol, and the fractionation of the extract with benzene. They demonstrated that injections of this extract into adrenalectomized dogs and cats definitely prolonged the survival period, an indication that the extract contained the active principle of the adrenal cortex. This they named "*Interrenalin*."

Hartman and coworkers extracted the adrenal cortex material with ether, which removes very little epinephrine, evaporated off the ether, and extracted the residue with warm 80% alcohol. The extract thus prepared was chilled, and the separated inert material was removed. The alcohol was distilled off *in vacuo*, and the residue dissolved in water and sterilized. It was shown that this extract is almost free from epinephrine. The continued injection of this extract into adrenalectomized cats will keep them alive indefinitely. Adrenalectomized young female rats were kept alive to maturity and reared normal litters. Hartman called the active principle "*Cortin*," a name which has received rather general recognition.

Swingle and Pfiffner prepared their concentrate by extraction with alcohol, and subsequent treatment of the extract with benzene and acetone, discarding the residues, then distribution between 70% alcohol and petroleum ether, transference of the alcohol fraction to 95% alcohol, filtration through permutit, which removes the epinephrine, and transference to water. This extract served to keep adrenalectomized cats and dogs

"Many of the findings of numerous investigators concerning the physiological properties of the cortical principle are in agreement, although there is still marked disagreement as to the function of the principle, as revealed by such findings."

alive for indefinitely long periods, and appears to be somewhat more potent than Hartman's extract.

Hoskins prepared a potent extract by simple extraction with glycerin, and demonstrated that it is effective by oral administration. He tested the extract on schizophrenic patients, whom he believes are in a condition of chronic hypoadrenalism, because of the secondary anemia, low blood pressure, reduced body temperature, and subnormal consumption of oxygen. After ten weeks' treatment with this extract, the average systolic pressure increased 20 to 30 mm. mercury and the diastolic pressure showed corresponding increases; there was some increase in body weight and in the red cell count.

Kendall and coworkers and Grollman and Firor obtained crystalline products from the adfenal cortex, but it is still doubtful if pure crystalline cortin has been obtained. Kendall separated nine closely related compounds, and believes that three of them, viz., $C_{26}H_{36}O5$, $C_{21}H_{34}O_5$, and $C_{21}H_{30}O_5$, are of functional importance. The crystalline compounds obtained by Pfiffner and Wintersteiner, and which have somewhat similar formulas, were found to be physiologically inactive. The most active preparation obtained by Pfiffner and Wintersteiner is a pale yellow, syrupy liquid, a homogeneous non-crystalline fraction assaying 400 dog-units per mg. by the Harrop-Weinstein method, soluble in ethyl alcohol, methyl alcohol, chloroform, acetone, and other lipoid solvents, and in glacial acetic acid, but sparingly soluble in water, benzene and ether. It appears to be nitrogen-free.

Adrenalectomized cats which received daily injections of small doses (0.5 to 1.0 cc.) of a potent extract were kept alive and in perfectly normal condition for one hundred days, when they were autopsied to prove the absence of cortical tissue. Similar results have been obtained with dogs, and some of these animals were kept alive for over two years. Initial doses of the extract equivalent to from 20 to 40 Gm. of the gland daily were administered to these animals, but subsequently injections corresponding to 4 to 8 Gm. sufficed. Although it has been demonstrated that oral doses of cortin are effective, oral administration is not nearly as effective as parenteral injections. Similarly, fresh or desiccated adrenal gland is not very effective when given by mouth, although it is toxic unless the adrenal medulla is entirely removed. Cortical tissue which has been heated rapidly to 100° C. may be used successfully. Intraperitoneal injections act very promptly, and large excess of cortical extract is non-toxic. Definite effects on normal animals have been reported as well as denied. The active principle has been found in minute quantities in the urine.

The assay of the active principle developed by Harrop and Weinstein is based largely upon the change in the blood non-protein nitrogen and urea which occurs after complete adrenalectomy. Adult male dogs, weighing from 6 to 10 Kgm., are adrenalectomized by the two-stage surgical technic, and proof of successful extirpation is shown by the withdrawal of the extract and the resulting appearance of definite symptoms of adrenal insufficiency. The animals are kept on a fixed standard diet, and the amount of extract necessary to keep them in normal condition is determined. One dog-unit (D.U.) represents the minimum daily Kilogram dose of the cortical active compound required to maintain normal physiological conditions in the adrenalectomized dog for a period of 7 to 10 days; the two criteria of normal physiological condition being maintenance of body weight and blood level of non-protein nitrogen or urea. Two methods of assay using rats have been suggested.

There are two antagonistic schools of thought concerning the function of the cortical principle, viz., one which stresses the control of sodium ions and attempts to relate the various changes associated with cortical deficiency to the loss of effective control of sodium metabolism; the other considers the chief and possibly sole function of cortin to be the control of carbohydrate metabolism, all other effects associated with the adrenal cortex being secondary. Swingle and Pfiffner consider regulation and maintenance of normal volume of liquid within the vascular system as the chief function of the cortical system; this is not necessarily antagonistic to the theory of sodium metabolism con-

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"SOLAR

SOLAR burns are grossly underestimated with regard to ease of eventuation, and immediate and latent seriousness. This attitude of indifference prevails chiefly because of the very human fact that the "layman's" sensory impressions of sunshine are anything but alarming.

Actinic dermatoses encompass a number of abnormalities. First and universally known is sunburn, which is the possible precursor of the less familiar but formidable disorders such as hydroa aestivales, xeroderma pigmentosum, eczema solare, hydroa vacciniforme, rosacea, and pruritis of vague origin. A fortunately rare sequela to any of these dermatologic dyscrasia is the predisposition towards epithelial neoplasms. Considering the frequency with which epidermal malignancies are encountered, this malicious impetus may not be so rare.

Mild burns provoke a hot, drawn, uncomfortable feeling. The skin is dry and a vivid erythema is usually present, accompanied by pain. These symptoms disappear in about 24 to 36 hours after which varying amounts of tan will be formed. In severe burns the pain is of a peculiar, burning, insufferable character, greatly augmented by the slightest body articulation. Contact with clothing or bedding is unbearable. The integument is parched and of an angry red hue. Shock and absorption of poisonous products generated in the outraged tissue are jointly contributory in bringing about a systemic toxemia evidenced by chills, fever, nausea, tachycardia, and a sense of impending dissolution. This syndrome, more or less in its entirety, will persist at peak severity for at least 36 hours. Toxemia and pain will now begin to moderate but the victim may be further distressed by swelling of the ankles, legs, face, and other parts of the body. This is probably a "walling off" process, i.e. a physiologic attempt to prevent the too rapid absorption of toxic substances now existing in the peripheral surfaces. More than occasionally, blisters will soon follow, covering large areas, which upon bursting, exposes denuded tissue, thereby opening a wide avenue for infection. Pain will completely subside in about 48 to 96 hours and as a concluding gesture, desquamation or peeling will usually take place. At an indefinite period after recovery, perhaps years later, the epidermis may then succumb to any one of the already mentioned skin maladies. This is not to be misconstrued, that every injury comparable to the typical extreme case outlined above, will some day be avenged by the surrender to an unpleasant or dangerous skin disease. Rather it is meant to stress that such an ordeal and particularly its repetition, will result in an epidermis woefully weakened in its resistance to pathology. A most impressive phenomenon, is the failure of those persons, who have endured the heroic punishment associated with inordinate irradiation, to "tan" well, if at all, not only that season, but for several succeeding years. The writer also found in many instances the skin became blotched, freckled, and otherwise unattractive. Years may elapse before returning to normal. These pigmentogenic and qualitative forfeitures are not generally known nor recognized.

The future of Sunburn Preventives is most promising for the following reasons. First is economic. It has already been pointed out that total physical and social incapacity may easily extend over a week. Realizing that the average vacation consists of less than two weeks, this waste of limited time is a cruel deprivation. Second is aesthetic. Normally the skin is improved in texture and appearance by pigmentation. But after the gross epidermal violation previously depicted in detail, depreciation in complexion appeal and little or no tan are inevitable. To any woman, such mishap is tragic. Third is physiologic. The impairment in resistance to dermatologic disease cannot be too strongly emphasized and is probably the most serious requital.

Illumination upon the entire subject of sunburn will never enable the public to dispense with sunburn preventives. This is due to the fact that immunization from solar burns comes from carrying over from year to year sufficient tan to prevent burning at the opening of the subsequent season. Tan of such depth requires

DERMATITIS"

By L. STAMBOVSKY

a full three months exposure for its acquisition. Life guards and others whose vocation or avocation enables them to spend the summer outdoors do not burn during spring or early summer.

Two alternatives remain by which photo-dermatitis can be obviated. One is by the confinement of initiatory exposures to within known safe limits. If radiation is not allowed to extend beyond this zone for four or five days, enough pigmentation will have been brought into existence to render thereafter, exposure regulation unnecessary.

We shall later see that 50 minutes is the maximum safe radiation for average untanned skin. Remembering the brevity of the usual vacation, it seems foolish to the layman to waste almost a week slowly getting tanned. The solar neophyte simply will *not* restrict himself to a daily 50 minute period. The fallacy, "If a little is good, a lot must be better," is the irrevocable guarantee for the continued health of the suntan industry. It is plainly seen that the public will never by its own efforts eliminate Solar-Dermatitis, which introduces the second and final alternative—the use of sunburn preventives.

Standards and measurements are the foundations of any science and no less so in that branch of physics and dermatology concerned with the prevention of Solar burns. Little if any unanimity of opinion exists as to how efficient sunburn preventives should be. This is not surprising in view of the fact that only on the beach, field, or stream could such information be determined. It is significant that the new Food, Drug, and Cosmetic Act, effective June 25th, has defined sunburn products as "drugs." This means that unless the industry standardize these preparations on a sound basis, the F.D.A. will promulgate standards of its own, which might prove far less acceptable.

The evolution of an "efficiency minimum" can only spring from the digestion and correlation of a number of pertinent factors—primarily physiologic reactions and estimated human habits. Normal untanned skin displays an average tolerance towards ultra-violet energy. Red heads and most blondes are excluded inasmuch as the wide discrepancies in actinic sensitivity among them prohibits even the roughest grouping. Tabulated[1], we note as follows:

Effect of June Sun at noon—average untanned skin

Minimum Perceptible Eyrthema	20 minutes
Vivid Eyrthema	50 minutes
Painful Burn	100 minutes
Blistering Burn	200 minutes

"MPE" is that degree of reddening, barely, though definitely discernible. "VE" is not representative of damage but is merely strong evidence that the epidermis is responding to stimulation. From the erythemal table it is easily appreciated that 50 minutes or "VE" is the maximum stimulus tolerable without injury. Further excitation advances into the painful burn ("PB") zone and will result in more or less irritation. Therefore protective agents, regardless of the time actually spent under the spell of Helios, should not permit a dosage greater than that which would engender a "VE" for reasons just explained. We have thus established the "physiologic reaction" factor.

The second required unknown, is the number of hours expended daily, by the average individual in pursuit of the Sun. The author alleged in 1933,[2] that four hours was about the ordinary period of indulgence on the New Jersey beaches, which is probably characteristic of any locality. This was reaffirmed in 1935[3] by virtue of further surveys. In the interim, additional estimations accompanied by the opinions of other observers, enable the writer to emphatically reiterate that 240 minutes does comprise the average daily radiation. In order that the integument shall not be subjected to more than a 50 minute or "VE" response, although actually exposed for 240 minutes (BB plus), it is obviously essential that the shielding film shall not transmit more than 20%, which fraction of four hours yields 48 minutes computable as 100% effective, energy reception time.

To avoid confusion, no mention has been made so far of several influential variables, consideration of

which is vital for the attainment of more advantageous accuracy than the "20% efficiency minimum" indicates. We shall make clear that 20% transmission is too low and must be raised, if the protected skin is not to be robbed of desired irradiation. The first variant is the marked declivity in biologically active Solar energy before and after meridian. The invaluable Luckeish erythemal data is based upon Solar intensity at noon, whereas we are concerned with radiations extending hours before or/and after midday.

Dorno[4] reports, from his studies of Solar energy below 3600 Angstrom units, (2900-3200A. is the erythemogenic and pigmentogenic range), that with a maximum intensity at 11 A. M., there occurred at 9 A. M. and 2 P. M., a 20% diminution of actinic light. Clark[5] claims an even greater hourly depreciation in the 2900-3150A. zone. On July 16th at noon, a reading of 9000 ergs per sq. cm. per sec. was obtained. At 10 A. M. and 2 P. M., a decrease of 44% and 33% respectively was recorded. An average of these differentials will net a mean ultra-violet reduction of 29% at 2 hours before or after meridian. These chronologic alterations suggest a modification of erythemal values as follows:

Time required to produce	*at noon*	*2 hrs. plus or minus 12 M.*	*Mean throughout severest 4 hrs.*
"MPE"	20	26	24
"VE"	50	65	60
"PB"	100	130	120
"BB"	200	260	240

Indubitably, the peak of Solar activity is at noon and therefore energy reception during any specified period would be greatest if it were so arranged that 12 M. exactly bisected the exposure, i.e. if the hours of radiation time were equidistant from the Solar zenith. For example, the maximum declension of Solar potency at two hours plus or minus, (before or after), noon, is 29%. At 4 hours plus or minus midday, a maximum loss of 69% exists. It is visible that a four hour radiation, from 10 A. M. to 2 P. M., would be amenable to a maximum declivity in ultra-violet energy, of 29%, whereas if this same period extended from 8 A. M. to 12 M., or from 12 M. to 4 P. M., a peak depreciation of 69% would be experienced. Therefore the severest time of day during which a four hour exposure might take place, would be from 10 A. M. to 2 P. M., and what is equally true, hours other than these, offer distinctly less Solar intensity.

Consulting the corrected erythemal table, it is apparent that between the hours of 10 A. M. and 2 P. M., when actinic effect is highest, a mean of 60 minutes will produce a "VE". If we are agreed that a "VE" is the maximum but desirable biologic response, then our protective agent must allow the passage of 25% of celestial radiant energy.

Necessity forces the introduction, at this point, of another element having considerable bearing on the development of a "standard." The likelihood of any person remaining in a fixed position relative to the Sun for as long as four hours (estimated average exposure), is extremely remote. Unquestionably, body rotation would apportion, in some degree, equivalent quantities of irradiation to all areas. Potentially, a 240 minute period of virtually, outdoor nudity, shielded by a film possessing a 25% transmission factor, resulting in 60 minutes of 100% effective ultra-violet activation, would be divided among posterior, anterior, and intermediate surfaces in the hypothetical ratio of 30-30, 40-20, or 50-10 minutes. It appears therefore, that 50 minutes would be the maximum stimulus to which any surface would be liable, and which is 10 minutes short of the "VE" stage. This leaves a competent margin for the absorption of still another inconstant.

The reflection of ultra-violet on or near large bodies of water strongly fortifies the potency of Sunlight by additive effect. Laurens is of the opinion that this property of water is about one-quarter that of snow. The writer surmises that snow may multiply by 100% the effect of direct Solar radiation. Accepting this figure (it certainly could not be any higher), aqueous reflectivity will by complemental consequence, intensify direct Solar energy by 25%. Remembering that within a four hour radiation, a mean of 60 minutes of 100% effective stimulation is needed for the production of a "VE", and that our transmission factor plus body rotation does not allow any surface to receive more than 50 minutes excitation, it is clear that the existing 10 minute latitude from "VE" is barely but sufficiently able to absorb the increased actinic energy caused by water reflection. Thus, by correlating the facts and theories portrayed, is the "efficiency minimum" of 25% constructed, and its flexibility confirmed.

A number of methods have been developed for the testing of Sunburn Products. They are chemical, photoelectrical, spectrographic, or biologic in nature. We shall discuss only the latter inasmuch as the others frequently yield determinations vastly divergent with laboratory or service results on actual skin, which is, of course, our primary concern. Mathematical accuracy is not claimed, but the Biologic or Erythemal Reaction does closely approximate the true worth of the preparations in question, due to the fact that the epidermis itself is used as an indicator and partially simulated, but compensated, sunlight as an exciter.

The "Erythemal Reaction" was first advanced in 1933,[6] and has undergone several refinements since then[7,8]. It is herein offered again in a still more applicable form. The quartz mercury arc serves as a source of energy. There can be no denial that this generator does not duplicate sunshine, but it is convenient to operate, has a high output, and compensation can be made. A great quantity of its emission is of a wave-length shorter than 2900A., which is not found in Solar radiation. Undesirable ultra-violet below 2900A. is eliminated by the interpolation of a sheet of Corex D glass between the burner and target. This

glass is practically impervious at 2800A., transmits 50% at 2950A., and 72% at 3000A. As the output ratings of mercury arcs will vary, being dependent upon age, wattage, and the quantitative restriction of all wave-lengths by the Corex D filter, it is essential to calibrate the particular lamp used, or in other words, to ascertain the time required at a certain distance to produce an "MPE" on average untanned skin. The technique employed in calibration and testing are fundamentally the same, and which is given in detail as follows:

The anterior portion of the forearm was finally adopted as being the most suitable for irradiation, i.e. for indication purposes. This choice was motivated by accessability, regularity of surface, and by the fact that this area, being never exposed directly to the sun, is consistently sensitive to ultra-violet light. Starting about one inch below the elbow on the inside portion of the forearm, four ¾ inch sections are laid off with ⅛ inch wide strips of adhesive. Bearing in mind that light varies inversely as the square of the distance, it is vital for the attainment of even approximate accuracy, that the entire field be precisely level relative to the quartz bulb itself, that this burner be in exact line with the longitudinal center line of the forearm, and finally, that the arc tube, longitudinally, should exactly cover the observed area, i.e. if the burner is four inches long, each end should coincide with theoretical perpendicular lines extended upward from the extremities of the irradiated field. Thus it is assured that every square unit of area will be the recipient of an equal amount of energy. Needless to say, the described alignment must be rigidly maintained during the entire period of radiation.

Adjust the gap between the generator tube and the target to 15 inches. At this distance most 500 watt lamps are capable of provoking an "MPE" somewheres in the neighborhood of one or two minutes. Lesser wattage may be offset by decreasing this space correspondingly. The burner should be brought up to maximum output by at least ten minutes previous operation. With a sheet of opaque paper, cover all sectors except No. 1. Commence radiation. After one minute has elapsed, expose sector No. 2, and then in succession, with one minute timing, repeat for No. 3 and No. 4. In this manner, sector No. 1 will have been radiated four minutes, sector No. 2, three minutes, sector No. 3, two minutes and sector No. 4, one minute. Readings should be taken in about ten hours as there is a tendency for threshhold responses to fade soon after appearance. "MPE" has already been defined as that degree of reddening barely but definitely discernable. "VE" is that intensity of color described as bright red or vermillion—but sans any suspicion of pain. "PB" is to be interpreted as an injury with which is associated appreciable pain. The fourth but least definite stage of actinic irritation is known as blistering burn ("BB"). These four gradations of ultra-violet stimulation occur in the relative multiples of 1, 2½, 5, and 10. Assume for exemplary purposes that sector No. 3, which was exposed two minutes, evidences a minimum yet definite pink coloration or "MPE". With the establishment of an "MPE" factor, the remaining three stages of photo-dermatitis are easily predicted. In this case with an "MPE" of 2 minutes, 5 minutes would be required for the production of a "VE", 10 minutes for a "PB", and 20 minutes for a "BB". Tabulated, we have:

"MPE"	2 minutes
"VE" 2½ 2	5 minutes
"PB" 5 2	10 minutes
"BB" 10 2	20 minutes

It is understood that at least 6 experiments should be conducted upon brunettes, if a dependable average is to be obtained. With the above information we are now ready for actual analysis. The procedure is practically identical as that involved in calibration, with the exception that three sectors are used instead of four. The middle sector is left as a control and the remaining two utilized as test areas. Apply the products under examination, in a film comparable to that found in normal service. Strictly adhering to the cautions given regarding the preservation of precise position relationship between source of energy and irradiated field, expose for 20 minutes.

Observations should be made after the passage of about 20 hours, which is sufficient time for the development of peak epidermal response. The basis of this method, as its name implies, depends upon different degrees of erythema, which, in turn, is significant of the amount of actinic energy transmitted by the protective film. It is therefore necessary for the analyst to be able to recognize the various stages of ultra-violet irritation. A nominal measure of experience will quickly endow the operator with this faculty. The function of the control sector is to demonstrate, that the lamp has delivered the photo-electric energy expected, that the particular subject used has reacted within average bounds, and also, to serve as a color comparator. Evaluations are simple and perhaps can best be explained by illustration. X and Y are two suppositious products under analysis. The "X" sector shows an "MPE". Since we are aware that our generator will produce this degree of irritation in two minutes, and since the total irradiation was twenty minutes, it is readily appreciated that the percentage transmission would be, effective radiation received divided by total radiation multiplied by 100, or 2 divided by 20 × 100 equals 10% transmission. A contingency that might be encountered is the fact that some of the newer chemicals have tremendously high absorption values—possibly so high that 20 minutes might fail to engender an "MPE". In such an event repeat the test in this manner; apply the preparation on both sectors and radiate for 20 minutes. Then cover

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EVALUATION OF

THIS discussion does not purport to be a combination of "rules of evidence" as to the creditability of scientific or practical publications, but merely intends to be an attempt to suggest some methods by which reasonably fair "rules of procedure" may be developed.

At the present time there is chaos. The decisions of the Council of the American Medical Association regarding the value of publications constituted the most authoritative basis upon which literature claims could be constructed. Consisting of leaders in their professional spheres, this body gave highly conservative decisions, but they were fair and—what is even more important—were applied consistently.

Since it is a well-known fact that the vast majority of papers, especially those dealing with clinical results on any given drug, do not agree among themselves, some sort of rules should be adopted by the industry so that out of some sort of gentlemen's agreement a definite procedure may be developed by which to judge the value or weight of a publication as a basis for literature statements.

To leave the situation as it is, namely at the mercy of the discretion of one or several members of the F. D. A. will in time lead to horrible consequences. Luckily, thus far, the present F. D. A. enforcement has been understanding and courteous as well as helpful within the limits of its power. Therefore, no criticism is intended, but what guarantees do all parties involved have that some future personnel changes may not put some individual in power there who has it in his might to paralyze an industry which is considered the most scientific in this country, because the interpretation of what is a true publication quoted by a manufacturer is left to this dictator.

The author has received a letter from Mr. W. G. Campbell in which he very kindly stated the attitude of the F. D. A. as follows: "Probably the only helpful suggestion that we can offer to you is to recognize that the courts have held that the manufacturer assumes responsibility for the statements made on his labels even though he is quoting the views of others. In the statutory definition of the term "misleading" as found in section 201(n), Congress has very definitely put the producers and vendors of food, drug, and cosmetic preparations on notice that their obligation is, first, to undertake earnestly to determine the truth and, second, to fully express it in their labels and descriptive circulars."

Let us therefore make an attempt to lay down some reasonable rules by which to determine the truth earnestly so that we may express it in our descriptive circulars. Like Pilate we have to ask ourselves "What is truth"? If five reputable investigators have published papers showing the efficacy as well as safety of a drug, does a sixth investigator making a sensational statement showing its ineffectiveness in the very same kind of cases proven to be sound indications according to the other five have a right to make the whole industry liable to criminal persecution? Should there not be some kind of impartial body of scientific men (physicians, pharmacologists, chemists, bacteriologists) to pass judgment on the results of this sixth investigator first? In the hands of some future unscrupulous and ambitious F. D. A. this might become a grand field for graft, gratification of personal prejudices and dictatorial control of business that would make the antics of the Prohibition enforcement agencies of unholy memory look like a beginner's efforts.

Of course, the F. D. A. is right. American industrial leaders and their scientific staffs should have made some efforts earlier to find such "common sense law" rules, instead of waiting until flagrant misuses in scientific advertising resulted in congressional measures. Just as was the case with Prohibition, laws were issued, politicians made rules regarding enforcement of industrial procedures with which they were only sketchily acquainted and instead of solving one problem another one was created. It has always been a favorite pastime of our law makers to issue laws, but not to give clear cut definitions as to the conditions adherent to its interpretation.

Would it not, therefore, be a wise step to have some sort of an agreement which could be used as a yardstick

MEDICAL ARTICLES

By W. M. WERNER

to satisfy the manufacturer, the physician and the F. D. A. To leave the final decision whether the papers by A, B and C are good and true results, while those by D, E and F are false and therefore to quote them in a circular is fraud to some bureaucrat who may or may not be the equal or superior of authors D, E and F in scientific training, experience and professional standing is against all rules of democracy as well as scientific traditions. In fact it is one more attempt to cripple freedom of the press under the guise of protecting the people. To leave conditions like this in a vague and ambiguous mess is of course excellent for lawyers, but people who only recognize facts like physicians, chemists, bacteriologists, etc. who do not fence with words, in general, cannot stomach such undefined conditions. We demand facts. Like the inhabitants of Shangri-La ("Lost Horizon") we realize that perfection is impossible, but we want to be reasonably certain that by applying reasonable "common sense law" rules we shall be reasonably safe from unreasonable enforcement tricks of a future autocratic bureaucracy. If we look back on the results which the autocratic Volstead Act enforcement handling had upon the personnel of the Federal Departments connected with it, we feel that a little more backbone in the early days on the part of the American taxpayer would have made such rules quite fair and workable, but left to a bureaucracy of course it ended in graft, crime and discrimination. However, my suggestions do not pertain to the future troubles of which there will be plenty anyway, but of trying to advocate a few simple rules which may be considered fair in "weighing" literature to be used as a basis for circulars.

I want it understood that I have no ax to grind, also know that some of these suggested rules may not be 100% fair, but most readers will—I hope—agree that they are better than the dictatorial sayso of one single person.

Here they are:

1. How many favorable publications should exist to warrant a "qualified" (I come to that later) statement in a circular?
   Suggested—5.
2. How many authors should have agreed upon the efficacy of a drug?
   Suggested—3.
3. How many clinics or laboratories should have reported upon the efficacy of a drug or treatment method?
   Suggested—3.
4. How should papers be evaluated?
   Suggested as follows:
   The highest type publication to receive a rating of 1. Such a publication to qualify under the following rule.
   (a) It is less than 3 years old.
   (b) Is published in a journal supervised by the American Medical Association.
   (c) Reports original results.
   (d) If a clinical paper, bases results on data obtained on patients under hospital care.
   (e) If a pharmacological, pharmaceutical, or biochemical paper if published in the United States.

   Deductions: For a paper older than 3 years, 0.1 is deducted for each year above 3 years. In other words a paper 9 years of age would have a rating of 0.4.
   If not supervised by Am. Med. Assoc. a deduction of 0.3 should be made, if a clinical or pharmacological paper.
   If a foreign paper a deduction of 0.4 should be made, if it belongs to the group of foreign journals reviewed regularly by the Jour. of the A.M.A. Otherwise a deduction of 0.6 should be made.
   Pharmacological, pharmaceutical and biochemical foreign journals to have a deduction of 0.5.
   For a paper giving results on ambulatory patients 0.2 should be deducted.
5. How does this fit in with rule No. 1?

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SOAPLESS

Since few detergents are more effective than soap, it is difficult to make a soapless mixture that will cleanse hair as easily and effectively as a good soap shampoo. Nevertheless this must be done, because soapless shampoos now on the market are enjoying wide sales based on their merits.

The major disadvantage of soap is its action with hard water to form sticky alkaline-earth soaps. These adhere to the hair and deprive it of the luster that should result from a thorough cleaning. A second operation, rinsing with an acid solution, will remove these sticky deposits, but apart from the extra labor involved, the rinse often has a slight but noticeable effect on the color of the hair.

It is quite doubtful that the slight excess alkalinity of a well-made soap shampoo has any adverse effect upon the hair, but since the normal reaction of the skin surface is very slightly acid, it is probably better, where possible, to use preparations that are either neutral or slightly acid.

Thus, a soapless shampoo must above all not react with hard water to leave a deposit on the hair and should preferably be neutral or slightly acid in reaction.

Soapless shampoos may conveniently be divided into two classes, the lathering and non-lathering types. The latter consist generally of mixtures of sulfonated oils, while the former are solutions of synthetic detergents.

The most popular sulfonated oil for use in soapless shampoos is sulfonated castor oil. This in itself, however, is somewhat inclined to be sticky and is generally modified by the addition of sulfonated olive oil. The combination is clear and will remain so at normal temperatures, although excessive cooling may cause cloudiness. This clouding will disappear when the shampoo is warmed again. Since all effective cleansing agents act by removing oil and adherent grime, they are likely to leave the hair in too dry a condition. This condition is remedied by the addition of a small amount of an inert oil, such as mineral oil. A good combination will therefore consist of 70 parts of sulfonated castor oil, 25 parts of sulfonated olive oil, and 5 parts of mineral oil.

It is essential that the sulfonated oils be of good quality, and especially that their hydrogen ion concentration be adjusted to the proper point. Excess alkalinity is unnecessary, while oils that are distinctly acid may be too viscous. At the neutral point, sulfonated oil mixtures are of intermediate viscosity and are easily washed out of the hair. For purposes of economy, a certain amount of water, preferably not more than 15 per cent., may be added to the shampoo mixture.

Since this mixture does not lather, the unskilled user may be misled into careless use. The hair must be made thoroughly wet, the shampoo oil should be rubbed with the hair so that no strands are left untouched, and rinsing must be complete. With proper use, results with sulfonated oil shampoos are entirely satisfactory, even in hard water regions. The residual mineral oil assures that the hair is not left in too dry a state.

Lathering soapless shampoos consist of solutions of detergents in water. It is useless to attempt to add compounds to regular sulfonated oil shampoos in order to give them lathering power. We have never heard of any attempt in this direction that was even partially successful. Also, it is best to avoid completely the use of sodium lauryl sulfate in lathering soapless shampoos. The most popular soapless shampoo now on the market is based on this compound, but the patents covering it are in very fine shape and you only invite serious trouble by patent infringement.

The first factor to be considered in choosing a detergent for use in a shampoo is its toxicity or irritating powers. In most cases the manufacturer has enough data to be able to give either an assurance or a warning in this respect. Unless you are reasonably sure that the detergent will not be irritating, you had better avoid it. The actual cleansing power must be studied by a series of trial shampoos, since lathering power is

SHAMPOOS

By JOSEPH KALISH

not necessarily a safe index as to cleansing power. As an example, saponin, with very high foam producing ability, has little use as a cleansing agent. Moreover, the washing tests must be made with hard water, since all of the synthetic detergents do not have equal resistance to lime and magnesium salts.

The behavior of the solution on the head will tell all that it is necessary to know about the lathering power and type of lather. Many compounds are satisfactory cleaning agents but the lather they produce may be thin and easily broken.

Solubility is an important quality that varies with the type of compound. Some detergents are available as powders or solids of other types, while others are sold as pastes or solutions. In working with solids or pastes it is advisable first to add a small amount of water and mix homogeneously and continue adding small amounts of water until the solution is of the proper concentration. Very often, however, it will be found that a concentration necessary to make a good shampoo will lead to a cloudy solution. We believe that not only is there nothing wrong with cloudy solutions, but that it should be possible to teach the consumer to value cloudiness as a means of distinguishing soapless from soap shampoos. Nevertheless, as matters now stand, clear solutions are preferred. Quite often it will be possible to clarify solutions by the addition of ethyl or isopropyl alcohols or glycols or glycol ethers. This must be done with care, since these solvents may suppress lathering power and drastically reduce detergency.

Finally, otherwise satisfactory mixtures may have too strong a cleansing effect and remove too much oil from the hair. In this case the cautious addition of compounds with emollient effect may be advisable. One-half per cent. of a sulfonated oil or an equal quantity of cetyl alcohol should be useful, especially if enough non-aqueous solvent is present to prevent clouding.

Below we list some of the synthetic detergents that have been recommended for use in lathering shampoos.

Aerosols, made by American Cyanamid & Chemical Corp.
Alkanols, made by duPont.
Igepons, sold by General Drug.
Intramines, available from Van Dyk & Co.
Lamepones, sold by Commercial Solvents.
Nacconols, made by National Aniline & Chemical Co.
Santomerses, from Monsanto.
Sapamines, available from Ciba Co.
Tergitols, sold by Carbide & Carbon Chemicals.
Triton Suds, sold by Rohm & Haas.
Ultrawet, available from Atlantic Refining Co.

Solar Dermatitis

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the control and *one* sector. Continue exposure for 5 minutes, and finally uncover second sector and radiate 5 more minutes. Thus sector No. 1 has received 25 minutes and sector No. 2, 30 minutes. If after twenty hours, sector No. 2 manifests an "MPE", the percentage transmission would be 2 divided by 30 multiplied by 100, or 2 ÷ 30 × 100 equals 6%. To return to sector "Y", suppose the skin herein is vivid red but no pain or tenderness is present. This would be a "VE" and following the regular formula we have, 5 ÷ 20 × 100 equals 25% transmission.

Data obtained by the described technique, as it stands, is *not* indicative of protective efficiency under the more gruelling conditions imposed by Solar radiation. This is due to marked differences between the Sun and the Mercury Arc. The spectral discrepancy has been partly obviated by the intervention of Corex D glass. The real dissimilarity, powerfully affecting ultra-violet response, is Infra-Red, in which, the Sun is extremely rich and the Mercury Arc, comparatively deficient. The synergistic influence of these long wavelengths is not physical but physiological. Upon impact

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PLANT CHEMISTRY

ALKALOIDS

ANTON HOGSTAD, JR. Ferris Institute College of Pharmacy

From the viewpoint of the pharmaceutical chemist, one concerned with drug plant constituents, alkaloids or vegetable bases, are of much interest and vast significance, for they not only represent a group of chemical compounds possessed of marked physiological action, but likewise offer the chemist a challenge from the angle of their organic chemical constitution. There are as yet many unsolved problems relative to alkaloidal chemistry, for in this field of endeavor one encounters that interesting phase of chemistry known as stereochemistry, or chemistry of space.

In this connection it is interesting to note that although we obtain atropine from belladonna, it is questionable as to whether or not belladonna really contains any atropine at all. –The explanation to this interesting phenomenon will be discussed later when dealing with the Nightshade family or the *Solanaceae.*

EWING GALLOWAY

Distribution in Nature

Alkaloids are well distributed throughout the vegetable kingdom. One of the most interesting of all alkaloidal-bearing families is that of the *solanaceae* or the night shade family, wherein one notes that interesting group of alkolids comprising atropine, hyoscyamine and scopolamine, the latter being associated with truth-telling methods as employed in attempting to convict criminals. It is also associated with twilight sleep, in combination with morphine.

The poppy family (*papaveraceae*) furnishes many interesting alkaloids of opium, many of which have played important roles relative to the relief or cure of disease. The coca family (*erythroxylaceae*), which yields coca leaves furnishes cocaine. Of late the Gnetales or *Gnetaceae* has come into considerable prominence on account of yielding ma huang or ephedra from which ephedrine is obtained. The crowfoot family or *ranunculaceae* yields a number of interesting alkaloids, delphinine and staphisagrine as found in larkspur and stavesacre which have been widely employed in connection as parasiticides as well as aconitine, the potent cardiac depressant and anodyne alkaloid. The monnseed family (*menispermaceae*) and the barberry family (*berberidaceae*) yield one of the few colored alkaloids, namely, berberine. From the lily family (*liliaceae*) is derived veratrine, however not from veratrum (*veratrum viride*) or American hellebore, but rather from sabadilla seeds. From the lily family we also obtain the alkaloid colchicine which is present in meadow saffron or colchicum.

The extremely interesting drug, calabar bean or physostigma, is obtained from the pulse family (*leguminosae*). This drug yielding physostigmine is the one employed by the African natives to determine their guilt or innocence. Physiologically allied to physostigmine is the miotic alkaloid pilocarpine as derived from pilocarpus or jaborandi leaves present in the rue family (*rulaceae*). The pepper family or *piperaceae* yields us the common condiment black pepper, in which the alkaloid piperine is present. The pungent taste of black pepper, however, is not due to the alkaloid piperine but rather to the volatile oil and pungent resin.

Ergot as widely employed as a parturient and hemostatic is a member of the flesh-consuming family or *hypocreaceae* and which contains several active alkaloids such as ergotoxine, ergotonine, etc. The nux vomica family (*loganiaceae*) is of vast importance for

On the opposite page is shown Chinese poppies. To the right is shown cinchona bark in Java. Below on the right is shown Chinese ma huang. And directly below is shown the gathering of belladonna.

from this family is obtained strychnine present in nux vomica, as well as St. Ignatius bean. This family likewise comprises yellow jasmine or yellow jessamine root (gelsemium) which contains several alkaloids of great toxicity, the leading one being gelsemine. Likewise the madder family or *rubiaceae* is of much importance for cinchona or quinine bark, which yields a vast array of alkaloids inclusive of quinine, cinchonine, cinchonidine and quinidine. Ipecac yielding the alkaloids emetine and cephaeline is also a member of the madder family.

They Resemble Alkalies

In light of the fact that solutions of alkaloids will turn red litmus paper blue and will form well-defined crystalline salts with acids, thus resembling alkalies,

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they were for a time being known as vegetable bases. Later the word "alkaloid" was coined for this valuable group of medicinal substances, the word "alkaloid" being so derived from "alkali" and the chemical suffix "-oid" meaning to resemble, in this case to resemble an alkali. The suffix "-oid" is also to be noted in such words as rubberoid, leatheroid, etc., resembling rubber and leather respectively. Chemical analysis of alkaloids has revealed that alkaloids contain nitrogen, hydrogen and in most cases oxygen. For the most part they are colorless, a few however being colored, such as berberine (yellow and the salts of sanguinarine as obtained from bloodroot (*sanguinaria canadensis*) being of a redish color.

A few alkaloids are liquid in character, such as coniine, nicotine, spigeline from pink root or spigelia; sparteine from broom tops or scoparius; lobeline from Indian tobacco or lobelia which is employed as the sulfate to stimulate respiration in the new born child; pilocarpine from jaborandi leaves.

As a class they are usually odorless, but in the case of nicotine and coniine one encounters strong characteristic odors. Practically all of them are characterized by possessing a bitter taste, which is especially true of strychnine which can be detected by its bitterness in great dilutions.

Owing to the fact that most of them contain asymmetric carbon atoms, one encounters optically active compounds in alkaloids, for the most part being laevorotatory, although a few of them are known to be dextrorotatory. One of their chief characteristics is that as a group of chemical substances they possess marked physiological actions covering a wide territory inclusive of being narcotic, (*morphine*) stimulan mydriatic (*atropine*) miotic, (*physostigmine*) antiseptic, cardiac depressant, (*aconitine*) anodyne, shrinking of mucous membranes (ephedrine), emetic and expectorant (emetine), parasiticidal (delphinine and staphisagrine), gout and rheumatism (colchicine), anti-malarial (quinine), etc.

The alkaloidal base, such as morphine, strychnine, etc., is in general quite insoluble in water while their salts are soluble. On the other hand their salts are generally insoluble in alcohol but not always. They are precipitated out of solution by many substances such as Mayer's reagent, tannic acid, alkalies, iodine dissolved in potassium iodide. For many years text books dealing with pharmacy set forth a so-called classic alkaloidal incompatibility in connection with potassium bromide. This fact was handed down from generation to generation and professors placed great emphasis upon the supposed fact that strychnine bromide was insoluble in water and that if precautions were not taken, that the patient would swallow all of the strychnine contained in the prescription in the last dose. Dr. Edward Kremers, former Dean of the University of Wisconsin School of Pharmacy, proved it to the contrary and that the precipitation which did occur was due to the alkalinity of the glass.

One would hardly expect alkaloids as being basic in character to occur free in plants, where acids are likewise present and such is not the case for they occur in nature combined with various organic acids. Strychnine occurs combined with igosuric acid; quinine with quinic acid; sanguinarine as previously mentioned with citric and malic acids; morphine with meconic acid, etc. Unlike inorganic bases, they form salts through the agency of addition products and not through substitution of the hydrogen radicle as is the case of an inorganic compound. Thus strychnine sulfate is strychnine sulfuric acid ($C_{21}H_{22}O_2N_{212}$, H_2SO_4, $5H_2O$.).

An Interesting Group of Alkaloids

My particular interest has always resided in the alkaloids of the nightshade family or *solanaceae*. Here we find an extremely interesting group of alkaloids inclusive of atropine, hyoscyamine and scopolamine. The drug members of this particular group include belladonna, hyoscyamus and stramonium.

This family is frequently referred to as the mydriatic family for its members possess mydriatic properties. Throughout the three members of this family there resides the difficult problem as to which alkaloids they actually contain. As has been stated previously, that although we obtain atropine from belladonna, it is questionable as to whether there is any atropine present in this drug known by the common name of deadly nightshade.

Before attempting to explain this peculiar condition it is well to know that atropine and hyoscyamine are isomeric in character. They both possess the same empirical chemical formula, but not so from a stereochemical point of view. Atropine is racemic in character, being a mixture of d- and l-hyoscyamine. The hyoscyamine of commerce is the l-hyoscyamine. Scopolamine is very closely related chemically to these two alkaloids. It is thought that in the course of extraction of atropine that the hyoscyamine is converted to atropine through the agency of the various chemicals employed in the extraction.

Drugs of this family are antispasmodic in that they relax over-contracted smooth muscle tissue; they check secretions and are anodyne in character and as a class are likewise stimulant in action. Although hyoscyamus and stramonium carry the basic actions of belladonna, there is quite a marked difference in their action and therapeutic use. Whereas belladonna is marked by a peculiar excitant and stimulant action, hyoscyamus on the other hand is characterized by a peculiar sedative action, being employed as a sedative in irritable conditions of the bladder, etc. It is also employed in connection with cathartic pills, to mitigate the harsh action of drastic cathartics. Stramonium on the other hand is also a marked excitant, being widely employed by certain tribes of the North American Indians to create a state of intense excitement and frenzy before going off to battle. Stramonium is widely employed in ointment form for piles and hemorrhoids as well as in asthma powders. In the former case it serves as an anodyne and in the latter case as an antispasmodic.

There is a marked difference in the various peculiarities of atropine, hyoscyamine and scopolamine likewise. It has been said that atropine and hyoscyamine are isomeric and that scopolamine is very closely chemically related to these two alkaloids. The typical atropine actions are those of mydriatic, checking of secretions, anodyne, stimulant, etc. Although these are likewise shared by the other two to some extent, hyoscyamine on the other hand is possessed of a goodly degree of a sedative action. This is strange in light of the fact that it has the same empirical chemical formula as does atropine. The difference in therapeutic action is to be found in the fact that the two are different stereochemically and that atropine is a racemic form whereas hyoscyamine is the l-form. Scopolamine carries with it an action not common to either of the other two, in that it is amnesic in character. Based on this peculiarity of action it is used in combination with morphine in twilight sleep, the morphine to deaden the pain and the scopolaimine to create a condition wherein the mother momentarily forgets what has taken place the moment before. On account of its amnesic action

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DIURETICS

By M. A. LESSER

In the normal body, a balance exists between the fluid ingested and that eliminated. Any disturbance of this balance results, of course, in a series of dangerous symptoms. When dehydration occurs, it is usually easily remedied by the oral or parenteral administration of liquids. Fluid accumulations, on the other hand, usually traceable to cardiac or renal impairment, are not so easily adjusted. Failure of the organism to eliminate this excess results in edema or dropsy. These fluids may accumulate in the tissues or in the body cavities. When fluid accumulates in the pleural cavity, the dropiscal condition is known as hydrothorax, when in the abdominal cavity, it is called ascites.

Since the water balance of the body is closely tied up with the salt content of the tissues, it is entirely sufficient in many cases of edema to reduce the condition by limiting the fluid intake, combined with a salt-free or a salt-poor diet.[1] When however, as is frequently the case, this and similar measures fail, recourse must be made to the use of diuretic drugs. Diuretics are drugs which increase the flow of urine. These agents help to eliminate waste products and poisons from the blood and to remove excess fluid accumulations in the tissues or in the body cavities. These comprise a large and valuable group of therapeutic agents. They do not, however, all act in the same way, and this difference in physiologic action has been used as the basis for classifying diuretics. The xanthine derivatives, for example, work by stimulating the kidneys, while the mercurial drugs of this group affect diuresis by irritating these organs. Digitalis and similar drugs increase the urine flow by improving the blood circulation not only in the kidney, but in the body in general. Saline drugs and hypertonic solutions depend upon variations in osmotic pressure to remove excess fluids via the kidneys. Others, a more or less miscellaneous group, work by still different mechanisms. Whatever the mechanisms, however, the diuretics, by and large, are an efficient and comparatively safe group of drugs, with a wide choice to fit the particular needs of each case. Moreover, the diuretics can often be combined with each other or with other drugs to give the benefits of synergistic effects.

The kidney-stimulating diuretics are represented chiefly by the xanthine derivatives; caffeine, theobromine and theophylline. All of these agents resemble each other in most points of their pharmacological action. Caffeine, and to a less extent theophylline, act on the central nervous system as well as on the kidneys, muscle and heart. Theobromine, however, has comparatively little effect on the central nervous system.

As a diuretic, caffeine (1:3:7 trimethylxanthine) is definitely inferior to the other two members of this sub-group. With caffeine, diuresis is rather uncertain, the secretion increase is smaller and of shorter duration than with theobromine and theophylline. In addition, the use of caffeine is prone to induce undesirable side-effects such as insomnia, nervousness and gastric disturbances. Since caffeine is only sparingly soluble in water, it is usually combined with sodium benzoate or sodium salicylate to heighten its solubility. Caffeine with sodium benzoate is well adapted for administration in solution either by mouth or hypodermically.

Theobromine (3:7 dimethylxanthine) obtained from cacao, or made synthetically, surpasses caffeine in its diuretic action. It is relatively free from side-actions and is not irritating to the kidney. Theobromine is, for this reason, widely used as a diuretic in all forms of dropsy. The drug, as such, is rather insoluble in water, but is freely soluble when combined with sodium salicylate. This combination, however, if given continuously for same time by mouth, is prone to cause nausea or vomiting. Theobromine sodium-acetate is said to be well tolerated by the stomach and also has the advantage of greater solubility than theobromine. Another compound, theobromine calcium salicylate (theocalcin), though less soluble than theobromine with sodium salicylate, likewise has the advantage of being less likely to cause gastric irritation. Inasmuch as theobromine and its salts are rapidly eliminated, they are preferably given in small, frequently repeated doses when a continual effect is wanted.

Theophylline (1:3 dimethylxanthine) is found in nature, but in such small quantities as not to be commercially available, and it is therefore prepared synthetically. Theocin is a proprietary name for the synthetic drug. Theophylline is the most active member of the xanthine diuretics and it is often effective when caffeine or theobromine fail. This diuretic action is not persistent, however, and it is best replaced by theobromine after two or three days. Theophylline has the disadvantage of producing untoward reactions in some cases, and renal irritation and epileptiform convulsions have followed its use. As is the case with the other drugs of this sub-group, theophylline is only slightly soluble, and is therefore combined with sodium acetate to hasten solution in water. Aminophylline, a mixture of theophylline and ethylenediamine, has greater solubility than either the basic drug or its sodium acetate combination. It is used as a diuretic to relieve the edema of heart disease or nephritis. It is claimed to have a dilating effect on the coronary blood vessels of the heart, and is frequently used in relieving attacks of angina pectoris.

The mercurial diuretics act by irritating the cells of the kidney, thus causing them to secrete more urine. With the exception of calomel, the administration of these drugs by mouth has not proven satisfactory and the organic mercurials such as merbaphen and salyrgan, are given intravenously or intramuscularly. Sometimes they are given rectally, in the form of suppositories, with good results. Thomson[2] has reported that the organic mercurial diuretics can be used with good results in cases of edema where there is no cardiac asthma, orthopnea or liver enlargement. Thomson also states that none showed toxic effects. Keith[3] however, points out that distressing reactions, though rare, have been seen after the injection of organic mercury compounds. These reactions include stomatitis, diffuse dermatitis, diarrhea, hematuria and renal insufficiency.

Calomel (mild mercurous chloride) was one of the first mercurial compounds used for its diuretic effect. The excessive diarrhea accompanying its diuretic action is a marked disadvantage, however. Calomel is, nevertheless, of great value in certain cases of cardiac dropsy, but it is of less value when this condition is due to hepatic or renal disease.[4] Calomel has been largely discarded in favor of less drastic remedies. Among the best of these is the organic mercurial, merbaphen, first demonstrated as an excellent diuretic in 1920, and has since found wide acceptance. Merbaphen (Novasural) is a complex compound of mercury with barbital, containing 34 per cent. of mercury and is used as a 10 per cent. solution. It is contraindicated in acute diseases of the kidney and in advanced nephritis. Merbaphen, like calomel, causes an increase in the excretion of both water and chlorides, and is effective in ascites and in cases of edema of cardiac and cardiorenal origin. Merbaphen is sometimes successful when other remedies fail. Diuresis generally starts after a latent period of one to three hours and reaches its height in six to eight hours. The drug is most effective when employed in conjunction with other diuretic procedures such as the administration of ammonium chloride by mouth and a salt-free, low-fluid diet.

Salyrgan (Mersalyl) is of more recent origin. This, too, is a complex synthetic organic mercurial containing almost 40 per cent. of mercury in a non-ionizable form. A 10 per cent. solution is used for injections. Like merbaphen, it is not indicated for use in acute or chronic nephritis or in cirrhosis of the liver. Salyrgan is a powerful diuretic and is of value in treating edema caused by cardiac decompensation. It is of particular value when digitalis and other heart stimulants have failed. Diuresis begins in about three hours and the maximum effects are obtained in twelve hours. Acid-producing salts and low-fluid and low-salt diets used in conjunction with salyrgan improve its efficiency as a diuretic. It is said that salyrgan is a little better diuretic and definitely less toxic than merbaphen.[5]

Mercupurin (Novurit) is a newer diuretic drug and combines the beneficial action of the mercurials with that of the xanthine derivatives. This product is an organic mercurial compound in chemical combination with theophylline. The presence of theophylline at the site of injection of the mercurial diuretic tends to prevent local toxic effects of the mercurial drug in the tissues. Steuer and Wolpaw,[6] studying the diuretic action of mercupurin in cases of cardiac edema, found that the drug was an effective diuretic and caused no unfavorable reactions. More recently, Stewart and Wheeler,[7] reported on the use of this agent in sixty-six cases showing physical signs of excess fluid in the tissues. In some cases the urinary output was increased as much as nineteen times, but generally the increase was not more than five times. The use of ammonium chloride appeared to increase the diuretic action. It is their opinion that mercupurin is at least equal and possibly superior to salyrgan and is to be preferred among known mercurial diuretics when it is desired to mobilize excess fluid.

Mercurin suppositories, each containing 0.5 grams of the mercurial salt used in mercupurin, offer a new, simple, safe and very convenient advance in the treatment of edema, particularly chronic or recurrent cardiac edema. Fulton,[8] after a study of twenty-five cases in which he employed this rectal therapy, concluded that its diuretic effect was "comparable to that observed after mercurial salts given intravenously." The advantages of such administration are many; injury to the veins is avoided, as is the pain of intramuscular injection, and furthermore, the patient can administer himself. With these suppositories, increased urine flow begins within one to three hours. No toxic symptoms, either local or systemic were noted. The daily use of ammonium chloride is advocated, before and during treatment. The mercurin suppositories are usually given in the morning, following a cleansing enema. This last is essential in order to obtain the best response. According to Coughey,[9] the prolonged use of mercurin suppositories in the treatment of chronic edema produced no symptoms of rectal irritation. As a result of a

series of comparative studies, Herrmann and Decherd[10] found that while mercurin suppositories are the safest mercurial diuretics, mercupurin, intravenously, is the most efficient.

The circulatory diuretics are essentially the same group of drugs which are used as heart stimulants and as vasodilators, and their action on fluid accumulations is more or less, a secondary one. The heart stimulates, by making the heart action stronger, increase the blood circulation. Freer circulation in the kidney enables that organ to more readily absorb and excrete fluid wastes. Among these heart stimulants are found; digitalis, strophanthus, scillaren, cymarin, squill, and apocynum.[11] Digitalis is, of course, the most important of these agents and the only one that warrants consideration here. It is an historical fact that when Withering first introduced digitalis, he did not know of its heart action, but used the drug solely for relieving dropsy. It is now known that the increase in urine does not arise from a direct action of digitalis on the kidney, as occurs with the xanthine derivatives, but rather only indirectly through changes in the circulation. The kidney merely shares in the general circulatory improvement and functions more vigorously. The general circulatory improvement with digitalis promotes the interchange of blood and lymph. Fluid accumulations are more rapidly reabsorbed into the blood vessels and then eliminated through the renal organs. The diuretic action of digitalis may then be considered a secondary effect of improved blood flow and is a result of the changes in the heart alone.[4]

The diuretic action of the vasodilator drugs is also a secondary effect, resulting from their action in dilating the blood vessels. This results in improved circulation in the kidneys and a lowered blood pressure, both of which effects tend to increase the urine output. The nitrites form this group and include; amyl nitrite, nitroglycerine, sodium nitrite and ethyl nitrite.

Saline diuretics accelerate the flow of urine by increasing the salt concentration of the blood and in so doing, increase its osmotic power. As a result of this effect, fluid is absorbed from the tissues into the blood and thence eliminated by the kidneys. The saline diuretics are preferably given in the morning on an empty stomach and should be well diluted. Ammonium chloride, and the acetate, citrate, and bitartrate of potassium, are considered the most important of these drugs. Others have, however, been widely used. Among these will be found; sodium acetate, sodium biphosphate, lithium benzoate, lithium citrate, ammonium nitrate and calcium chloride. Urea, because it probably produces its effects by salt action, can also be included among the saline diuretics.

Ammonium chloride is used as a diuretic by itself, but is especially useful in combination with organic mercurial diuretics in treating cases of nephrosis and congestive heart failure. This salt renders the urine acid, and it increases the elimination of chlorides, fixed bases and water. This diuretic action may persist for a time after the administration of ammonium chloride has stopped. This salt is apt to irritate the stomach, inducing nausea and vomiting, very large doses sometimes cause acidosis. When symptoms of acidosis appear, the use of ammonium chloride must be stopped.

Potassium acetate and potassium citrate have been much used as diuretics and for increasing the alkalinity of the urine. They have the advantage of not neutralizing the gastric juice, of affecting the digestion except from their salt action, which may be lessened by using these salts in dilute solutions. They are considered effective diuretics and increase the amount of urine and urine-solids without irritating the kidneys. They should not, however, be used in cases of acute nephritis since toxic effects may follow. In such conditions it is preferable to use sodium acetate to avoid the poisonous effects of the potassium ion.

Urea, like the other saline diuretics, depends upon osmotic action for its effectiveness. It may be given by mouth, in which case comparatively large doses are required, or it may be injected intravenously to give powerful diuretic effects. Urea is rapidly absorbed from the intestine and, even in large doses, is practically free of any action on the tissues. It is eliminated completely and promptly by the urine, usually within twenty-four hours. Diuresis with urea depends upon good renal function, and its excretion is impaired in chronic interstitial nephritis. Urea has been found useful as a diuretic in the treatment of congestive cardiac failure. Some patients, however, experience nausea when treated with this agent.

Saline diuretics and other agents which act similarly are often given intravenously to increase the withdrawal of excess fluids from the tissues into the blood by osmosis. These accumulated fluids can then be eliminated through the kidneys. This use of hypertonic salt or glucose solutions have become a standard therapeutic procedure and they have found use, not only as diuretics, but also in the withdrawal of fluid from the cerebrospinal system. In such conditions as brain tumor, encephalitis and meningitis, these solutions have been employed to relieve the intracranial pressure due to fluid accumulations. The preparations used most frequently are: 10% sodium bicarbonate solutions, 10 to 33% sodium chloride solutions and 10 to 50% glucose solutions. Within the last few years, solutions of other materials have been tested and have found some acceptance. These include sucrose and sorbitol.

Evidence has been gathered to show that hypertonic solutions of sucrose, usually in 50% solution, act as powerful but innocuous diuretics when given intravenously. Among the first to try this agent was Strohm and Osgood[12] who used this agent in relieving anuria in postoperative urologic cases where mercurials were undesired and where other diuretics had failed. Later tests on animals showed that the urine output was more than doubled in dogs after sucrose treatment. Messerman[13] also tried this sugar on seventeen cases and made

further studies on sucrose's action, safety and efficiency as a diuretic. Other workers[14] have shown that hypertonic solutions of sucrose offer certain advantages in the therapy of intracranial or cerebrospinal hypertension. In these cases no untoward effects were noted and clinically the patients were improved, as shown by relief of headache, vomiting, vertigo and dizziness.

From experimental work on dogs using the polyhydric alcohol, sorbitol, West and Burget[15] came to the conclusion that this substance is superior to sucrose as an intravenous diuretic. They found that a 50% sorbitol solution is non-toxic, is rapidly excreted after intravenous injection, has a higher osmotic pressure than sucrose, is less viscous and more easily injected than the sugar. Strohm[16] has found that a 50% sorbitol injection caused diuresis in a patient who had failed to respond to sucrose or glucose in 50% solutions. This worker, using dogs, has also tested mannitol and raffinose as diuretics. A combination of these two acted as a fairly efficient diuretic. More work, it would appear, must be done to establish the value of sorbitol as a diuretic.

Vitamin C is also being studied in relation to its possible value as a diuretic. Working with dogs, Tislowitz[17] found that the intravenous injection of 10 milligrams per kilogram of body weight of freshly neutralized ascorbic acid caused a marked increase in urine formation. It was also determined that most of the vitamin was eliminated in the urine in three to four hours. Abbasy,[18] working under carefully controlled conditions, has shown that vitamin C possesses a specific diuretic action on human beings.

In this large group of diuretic drugs it would appear that a sufficient number of valuable agents is available to suit every need and occasion. Nevertheless, research is constantly going forward to create even better and more efficient diuretics to relieve a wide variety of diseases.

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Solar Dermatitis

(*Continued from page 433*)

with skin, this energy generates surface and subsurface heat thereby inducing hyperemia, which in turn, results in increased sensitivity to photo stimulation. Laurens quotes a few references in corroboration of the above and he also feels that the hyperemia produced by long waves augments the action of ultra-violet. Inasmuch as no specific information concerning this sensitization could be found, an attempt[9] was made to determine approximate figures for this phenomenon, which are necessary, for the correlation of the Mercury Arc readings to Sunlight.

The inside portion of the forearm was laid off as for calibration, but was further divided by an 1/8 inch strip of adhesive placed longitudinally, down the center of the entire field. In other words each sector was cut into two halves, which means that we now have four halves each side of the longitudinal center line. With a magazine or some other non conductor of heat, cover the entire area up to the center line. This leaves four half sectors exposed but protects the adjacent four halves. Heat with an infra red lamp until an appreciable hyperemia has been produced in the unprotected half sectors. Immediately remove cover and proceed exactly as for calibration. The results thereof will be found very interesting. In the writer's limited experiments, an "MPE" was stimulated in sector No. 3 in 2 minutes, but only on the half exposed to previous infra red. It required 3 minutes for the same response from unheated skin. It is easily seen that a 33% increase in ultra-violet sensitivity has been brought about by hyperemia.

Loewy and Dorno claim a maximum surface temperature of 44° C. during irradiation with long infra red rays, while sunlight produces a cutaneous maximum of 38° C. In the former instance the temperature was raised from the normal 32° C. to 44° C. or 12 degrees and in the latter, from 32° C. to 38° C. or 6 degrees. Obviously, intensity of hyperemia is dependent upon degrees of heat and is it not logical, that since it is agreed that hyperemia does sensitize skin towards ultra-violet, the degree of sensitization would be contingent upon degree of hyperemia, which brings us back to the prime mover—heat. Therefore we can calculate roughly, the increase in ultra-violet sensitivity that can be expected from the heat generating component of sunshine. By proportion, we note as follows:

$$12{:}6 :: 33{:}X$$
$$12X = 198$$
$$X = 16\% \text{ increase in sensitivity}$$

Raising this 16% to 20% compensates for spectral deficiencies of the Quartz Mercury Arc, in other bands than infra red. In order to convert transmission ratings obtained by Mercury Arc excitation, to figures representative of behavior under Solar influence, it is necessary to add the correlation factor of 20%. For example, if product "X" is found to transmit 10%, adding 20% yields a "corrected for Sunlight" transmission of 30%.

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Evaluation of Medical Articles

(*Continued from page 431*)

Suggested: At least 5 "perfect" publications (each rated 1), or an equivalent of others making a total rating of 5.

6. When results published are controversial, how many publications should be in favor of using a certain drug or treatment before we should mention it in a circular?
   Suggested: At least 50% provided of course these amount to at least 5 papers of rating 1 or correspondingly more.
7. How should a controversial statement be "qualified" in a circular?
   Suggested: "In the opinion of "A" (name and date of publication) his results warrant the use of the product for the following indications." At the end of the statement should be added: "These statements however are controversial at the present time and should be accepted at the discretion of the physician."
8. Should this "qualified" clause be added when more than 85% of the papers agree on the effectiveness of the drug?
   Suggested: No, but of course the "5 rating" provision must be kept.
9. How should U. S. Government publications be evaluated?
   Suggested: On the same basis as Am. Med. Assoc. publications.
10. What is a publication?
    Suggested: A publication is printed matter appearing in the English, French, German, Spanish, Italian or Russian languages in which original data are compiled pertaining to the drug or treatment in question.
11. What about the professional standing of the author?
    Suggested: Ever since cod liver oil was pronounced to be of no therapeutic value by an august body of authorities, it seems to be the best to employ democratic principles and not stir up some touchy natures, but let everybody abide by the majority rule. This, I frankly admit, is a weak point, and I know of no fairer solution, but am open to conviction.
12. How about publications mentioning proprietary names of products?
    Suggested: 0.5 should be deducted if an American paper and 0.8 deducted, if printed abroad.
13. Should pressure be brought upon legislative bodies to order government departments to made authoritative statements as to the value of drugs?
    Suggested: Yes, but those departments will not like it.
14. Does any new publication showing non-efficacy constitute reversal of all previous favorable literature?
    Suggested: No, but 3 consecutive (rating 1) papers by at least 2 authors published since the issue of a circular should call for removal of former favorable circular statement, if those 3 new papers indicate non-efficacy of a drug or treatment. However, this does not pertain to toxic action of a drug. I wholeheartedly concur with the new regulations demanding immediate suitable changes, if 1 paper (rating 1 or its equivalent) shows serious toxic reactions in cases where they had not been noted before.
15. Do I consider this a workable basis of "rules" to work on?
    By no means! This is a very imperfect collection of ideas which however may start some sort of exchange of opinions on this difficult and touchy problem which in the end may produce some sort of a system to enable us to tell the physician something about the product and its possible indications without being accused of excessive advertising.

These rules might have some appeal to the scientifically trained members of the staffs of the drug industry, because many feel that codification of the present vague ideas would be welcome. I fear, however, that from a lawyer's point of view of course, this would be all wrong, but then how would the legal gentlemen feel, if we appointed physicians, chemists and bacteriologists to pass judgment on traffic law reforms?

Plant Chemistry

(*Continued from page 436*)

it is also employed as the drug in connection with truth-telling on the part of those suspected of crimes.

Thus it will be seen that the Solanaceous alkaloids comprise a most interesting closely interrelated group of alkloids. It is quite difficult to say just what alkaloids belladonna, hyoscyamus and stramonium actually contain, for there is a great divergence of opinion as set forth in various texts on this subject.

Morphological vs. Chemical Classification of Plants

Another interesting chapter in relation to the study of alkaloids is the one as based on the thought, that even though the present morphological classification of plants as developed by the botanist, is somewhat arbitary and clumsy, nevertheless the fact remains that even when classified according to morphological characteristics, there are certain definite chemical interrelationships within a family of plants, as has been pointed out in the case of the nightshade family or *solanaceae*.

It is to be regretted that we do not have at our command a chemical classification of plants. Various attempts have been made by different research workers in this connection, but the task remains incomplete to date. It would appear as though the most satisfactory classification of plants would be one as based on chemical constituents rather than on morphological characteristics.

..Can-Making

They're finding NEW ways of PACKAGING merchandise! They're building up greater Sales Power for products . . . new and old! ★ "NATIONAL" ideas of Container design and decoration rate leadership *wherever* PACKAGING goes into competition.

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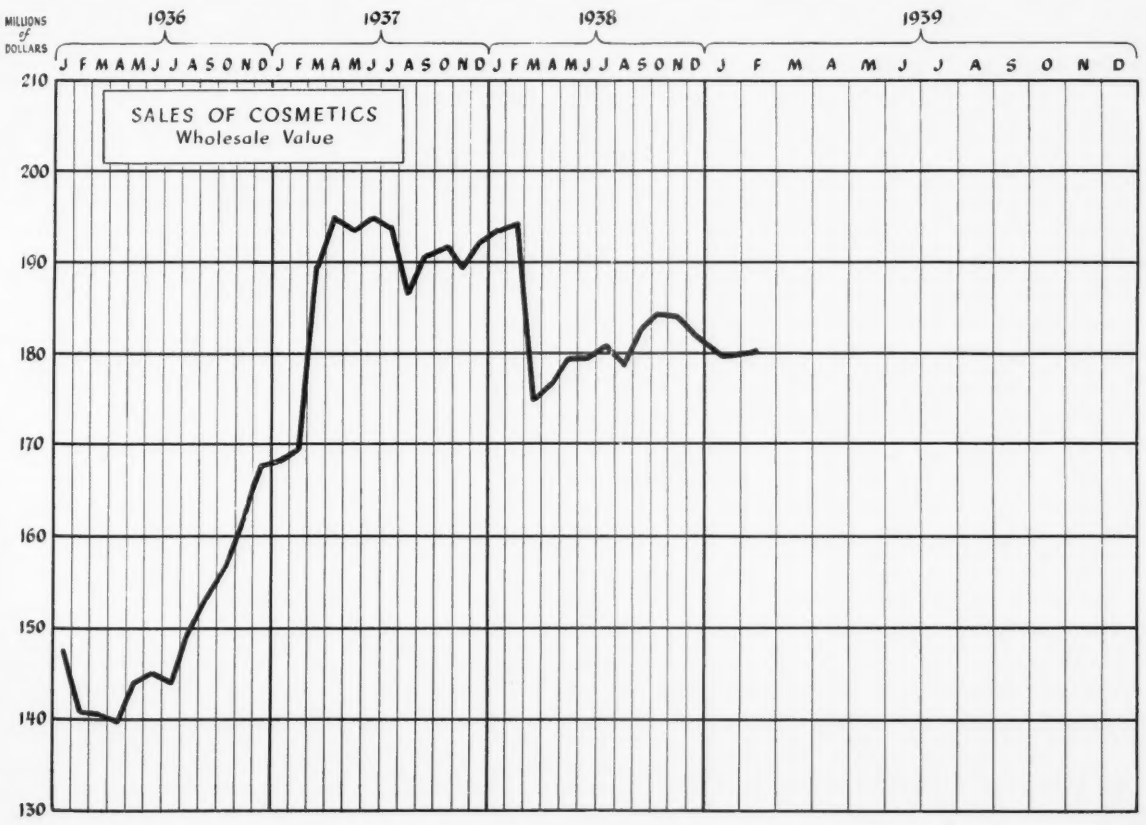
PACKAGING AND MERCHANDISING NEWS

THE COSMETIC TREND: Cosmetic counters are taking on their early summer hue. There is a noticeable tendency to make all-year items out of many seasonal ones. Buyers are more inclined to test their markets as the unrest, resulting from Food and Drug Act regulations, has communicated itself to the consumers. Buyers want to know where they stand. The situation favors established brands and family groups. Consumers favor size plus quality.

Winter trends in the shades of nail polishes, lipsticks and other make-up follow through rather on the established trends. Shades underline the youthful appearance of the wearer indicated by the direction of the dress fashions. Basic make-up as powder bases, liquid powders, etc. are likely to find increased attention, because their use will be more necessary than ever and there should be a large demand for cold and cleansing creams.

The indecisive trend in perfume preferences remains somewhat a puzzle. While fashion writers have been talking bouquets for months there has not been a noticeable decline in the interest for straight scents.


MILLIONS of DOLLARS
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SALES OF COSMETICS
Wholesale Value

The wholesale value of toilet preparations was equal to $180,128,000 for the year ended February 1939, and compares with $194,165,000 for the year ended February 1938. This represents a decline of 7.2 per cent.

Striking CONTRAST

WHAT A WHALE OF A DIFFERENCE A GOOD TUBE MAKES!

The famous "China Clipper," zooming above a Chinese Junk, presents dramatic, eye-catching contrast. Similarly, the outstanding beauty of a skillfully designed and colored New England Tube stands out in vivid contrast . . . catching the eyes and the preference of busy shoppers.

New England has successfully mastered the art of producing collapsible tubes that do an outstanding selling job. Our experienced merchandiser-designers know the essential qualities of a successful sales package. They will gladly redesign or create an entirely new tube and carton for you. Difficult color combinations or the perfect matching of unusual color tones on *metal and carton board* is taken in stride. If your color scheme is hard to reproduce exactly on metal, entrust the job to our craftsmen.

Remember, ONLY New England Tubes are made by the metal-toughening Sheffield Process. And ONLY New England makes cartons, too, for delivery at the same time. Take advantage of this *better* tube and carton service. Get packages that stand out in striking contrast above the rest. Write today. Samples, suggestions, quotations, and the aid of our trained field men incurs no obligation.

Photo courtesy Pan American Airways

New England SHEFFIELD PROCESS TUBES

NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 SO. CANAL STREET, CHICAGO • NEW LONDON, CONN. • W. K. SHEFFIELD, 500 FIFTH AVENUE, NEW YORK
N. CAY MATTHIEU, 1965 PORTER STREET, DETROIT, MICHIGAN

Shampoos promise well among the hair preparations as repeated shampooing is a necessity following the wide use of concentrated water waving lotions and hair lacquers.

For manufacturers the European situation is of some interest. It will lead to a larger foreign demand for American cosmetics and this tendency is further supported by the publicity for American merchandise that will follow the opening of the New York World's Fair. As it develops cosmetic manufacturers will do well to remember that the pace maker for American industry abroad is the trade paper of their industry. It is the first source of information to which the foreign buyer turns. Trade paper advertising, in consequence, is likely to bring additional dividends this year in the form of export enquiries. This possibility should not be overlooked when making up advertising appropriations for the current season.

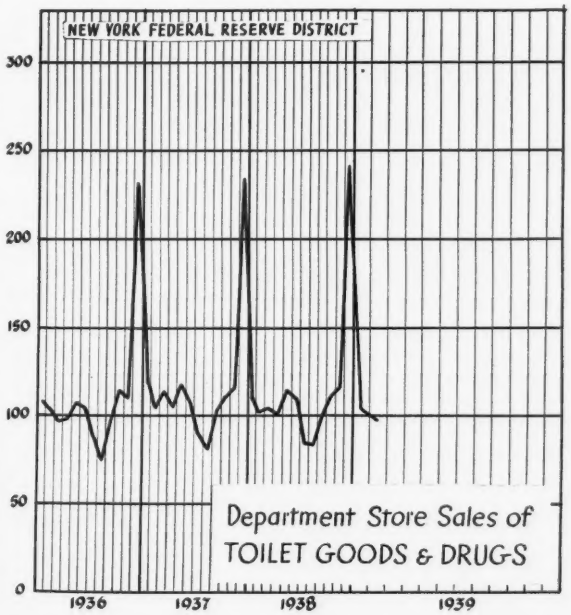
ADD VITAMINS: Many, many years ago our ancestors used to get their vitamins from foods, bought in the grocery store. Then, more recently, the drug industry went into the vitamin business, first, with cod-liver-oil, and later, in a big way, with all the known vitamins. In the meantime, the grocery stores kept on selling food. Now, it seems, at least one of the grocery chains, Kroger, has decided to enter the vitamin business the other way as well, the drug way. Kroger is selling vitamin capsules for 50 cents, a box of 30.

At the same time, the syndicate stores have appeared as a retail outlet for vitamin products. In practically all of them you can buy a box of Healtho Quality Products Co., Cincinnati, vitamin capsules for 25 cents, a box of 20. Potencies are 10,000 International units of vitamin A, 945 International units of Vitamin D, 45 Sherman units of vitamin B and 10 Sherman units of vitamin G.

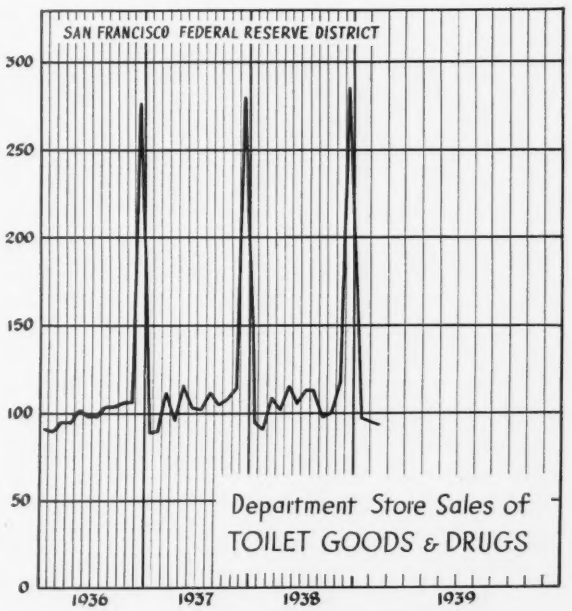
PEPSODENT POINTERS: According to Charles Luckman, vice-president and general manager of the Pepsodent Co., the market for dentifrices is almost static. It reached its ceiling some years ago and since then the total consumption of dentifrices in this country has not fluctuated more than about 8 per cent.

While on the subject of Pepsodent, the current copy on Pepsodent antiseptic, featuring chlor-thymol is coming in for considerable criticism. The headline states that, "Chlor-Thymol makes Pepsodent Antiseptic kill germs in seconds, even when diluted with two parts water." The subhead states, "No other leading brand can truthfully match this." Later on it states that "No other nationally advertised mouth antiseptic can truthfully say this."

Even if you smile when you say that, the Federal Trade Commission is quite likely to look into it, conditions being what they are.



Sales of toilet articles and drugs by department stores in the New York Federal Reserve District were 3.8 per cent. less in February 1939 than in the same month of 1938. Corresponding unadjusted index numbers are 97.5 for February 1939, 104.6 for January 1939, and 101.3 for February 1938.



Sales of toilet articles and drug sundries in the San Francisco Federal Reserve District were 4 per cent. greater in February 1939 than in February 1938. Los Angeles sales were 5 per cent. greater, San Francisco sales were 2 per cent. greater, and sales in the Pacific Northwest increased by 7 per cent. The unadjusted index numbers for the whole district were 93.5 for February 1939, 96.8 for January 1939, and 89.9 for February 1938.

THE "EARLY AMERICAN" VOGUE

by a new, economical multi-color process

The popular Early American motif will soon grace the cosmetic counters of stores all over the country — in the four illustrated vanities. One is brass, one brass and molded plastic, two are aluminum. The better to capture the current style market, all four designs are applied with flexible, economical use of several colors, made possible by a new Scovill process.

New freedom of design and treatment, at a reasonable cost, is constantly opening up to cosmetic manufacturers who turn to Scovill. Many a design or method of handling, kept from the market because of die costs, can now be economically used.

Whether you wish to capitalize on the Early American Vogue, or other treatment, or to win the market with some other saleable container or closure — get in touch with Scovill now. A representative from any of our offices will gladly show you samples of the vanities illustrated here, and of other recent Scovill developments. Or, if you wish us to work out practical production for some new idea, blueprint, or model — our stylists and engineers are at your service.

The Majority of Brands in Leading Stores have Scovill-Made Containers

SCOVILL
Masters of Metal

Hutzler Brothers, top-flight Baltimore department store, carries 25 brands of cosmetics. And 52% of these brands are made by manufacturers who have come to Scovill for one or more items in their line.

SCOVILL

MANUFACTURING COMPANY

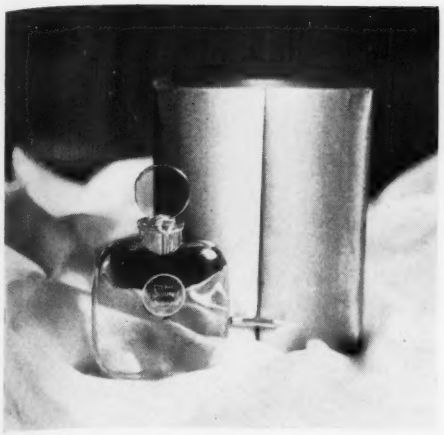
Drug and Cosmetic Container Division

69 MILL STREET · WATERBURY, CONN.

Boston, Providence, New York, Philadelphia, Syracuse, Pittsburgh, Chicago, Cincinnati, San Francisco, Los Angeles. IN CANADA: 334 King Street, East, Toronto, Ontario.

HOUBIGANT

Houbigant makes a selective American introduction of their exquisite Parfum Demi-Jour, "Twilight," to fit the fashion lead of today. "Prettiness" is the vogue and Demi-Jour personifies it. Its presentation is in the most appealing feminine style. The brown moire coffret with light yellow crepe lining makes an attractive setting for the stunning iridescent flacon.



HOUBIGANT

REVLON

A new gypsy-rose-red shade, "Tringar," has been announced by the Revlon Nail Enamel Corp., timed to the newest gypsy excitement in fashions. Revlon has made Tringar in three graduated tones, No. 1, 2, and 3, because of the recent success of "Jueltone" which initiated this system. The numbering 1, 2, and 3 represents three different intensities to provide for varied tastes.

REVLON

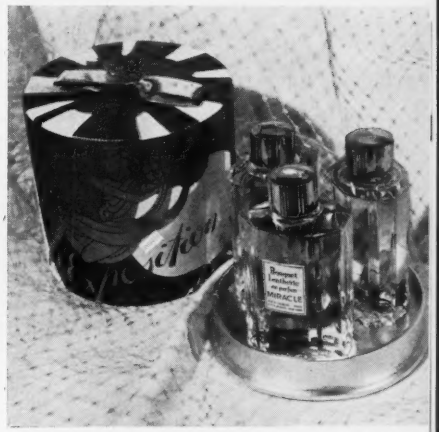
LONDON HOUSE

London House after-shave lotion and scalp and hair lotion, formerly obtainable only in the de luxe pottery jugs, are now being offered in maroon-capped pinch bottles encased in copper wire mesh. This new economical package was produced in response to requests from users who wished an inexpensive bottle from which to refill the original containers. The pottery jugs will be continued.

LONDON HOUSE

LENTHERIC

Lentheric's "l'Exposition" package greets the two great Fairs of 1939—San Francisco and New York. "l'Exposition" presents three flacons of Bouquet Lentheric in Tweed, Miracle, and A Bientot. The package is done in vivid tones of gold, fuchsia, and French blue, and the cover design depicts two draped figures, each holding a world globe.



LENTHERIC

ROSE LAIRD

Rose Laird, who recently created a group of Young Skin preparations for boys and girls in their teens, now introduces a specially priced Young Skin Kit containing four essential creams and liquid preparations for a daily routine of skin care. The compact, attractive little kit contains liquid facial soap, greaseless lubricant, overnight ointment, and protective lotion.

ROSE LAIRD

GERMAINE MONTEIL

Germaine Monteil has assembled a special promotion kit which is available in brown or black alligator grain or in Dupont rawhide. It contains cleansing cream, skin freshener, night skin cream, lipstick, beauty balm and face powder. Available for a limited time only.

GERMAINE MONTEIL

NEW HIGH IN APPLICATORS: Our English friend, "Shelf Appeal," is responsible for the accompanying illustration and description of what, it seems to us, sets a new high in applicators.

"The average husband, observing the average wife performing her nightly ritual of face-creaming, is content to suffer in silence while she bestows the contents of her vanity pots with equal liberality over face, hands, towels and sheets.

"Not so Mr. A. L. Vandervelde. Possessor of an inventive mind, he set about improvising a handy little applicator which should make it possible for the woman to administer her potions without actually touching them with her hands.

"In its original form the device consisted of a threaded plastic buffer rather like a broadened tooth paste cap which fitted to the end of the tube and admitted the cream through a cluster of a tiny performations. A series of ringed grooves in the cap had the effect, when moved over the face, of gently massaging the cream into the skin.

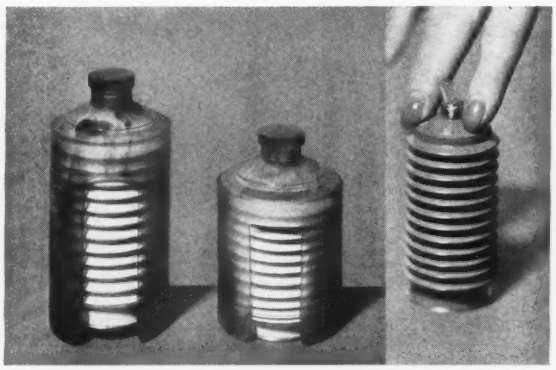
"Its popularity among his wife's friends led Mr. Vandervelde to reconsider his original make-shift in the light of its possibilities in the open market.

"Realizing that it was not a salable proposition in its present form he proceeded to redesign it, attaching the cap to a cylindrical plastic container. To facilitate application the buffer end is hinged to the neck by a ball and socket joint. The cream is forced up from the lower container by a sliding base working on the piston principle and ejected at the top through the perforations.

"The device is patented under the name Cle-Ma and retails at 5s. 0d."

Thus "Shelf Appeal," and as we read this we harked back to dear old 1934, in November of which we described an applicator designed by Louis J. Stern. That applicator was made to screw on to the usual collapsible tube and was for applying brushless shaving cream to the face without using the hands. It was made of rubber, was about an inch or so in diameter, and the surface was covered with small rake-like prongs of soft rubber. The cream was extruded through a hole in the center and then spread on the face by the applicator as the tube itself furnished sort of a handle. Since that time we have described several other spreader devices but since 1934 we had seen nothing which gave us that old bird dog feeling until we came across this gem in "Shelf Appeal."

ACCORDION TUBES: We have received the following communication and the accompanying illustration from Charles Davis, 4, rue de Longpont, Neuilly-sur-Seine, Paris, France. His idea is ingenious enough to take our fancy and it is reported here at considerable length with the thought that you, too, may find it interesting.



"An improved type of collapsible tube has been invented and is now being produced, by providing the collapsible container as used heretofore with pleats or folds, giving it a sort of miniature concertina or venetian lantern appearance. These pleats are sharply defined so that, under the slightest pressure, the tube collapses axially and extrudes its contents.

"Some of the advantages of this container are obvious, particularly its attractive appearance, and it is not exaggerated to say that it is quite revolutionary as window display. But preparations packed in these tubes possess other powerful selling points.

"Attractive appearance is retained during all the time the tube is in use, and is not limited to its packaging appeal. The pleated tube stands on its base and its height is reduced progressively, almost imperceptibly. The ordinary collapsible tube is an eye-sore, especially after it is about half empty.

"This tube is particularly easy to handle. Just press it downwards or from bottom upwards. In the first mentioned way, it is not even necessary to move the tube from where it stands. Just remove the cap and the collapse of the pleats, under the finger, will extrude

through the nipple the exact quantity required, extrusion stopping when the pressure ceases. But even when the tube is taken bodily in hand, one realizes how very much easier it is to use than the every-day collapsible tube.

"In addition to the avoidance of daily waste by the absence of spurting after use,—and before one has had the time to put the cap on again,—waste of contents in the folds of the tube is entirely eliminated in the pleated tube, practically 100% of the contents being extruded. In present day collapsible tubes where extrusion is obtained by squeezing or rolling, from 6 to 10% of the contents are wasted irremediably.

"From the point of view of production, the writer has solved the manufacturer's problems by inventing (and building) the machine which pleats these tubes,—on the premises of the manufacturing perfumer or chemist. The raw material is the tube itself,—an ordinary collapsible tube. The closure is a metal stopper, rolled on, very much on the same principle as lids in the tin can trade. Two operatives, one at the pleating machine, and the other stoppering, can handle 250 tubes an hour. The tubes can be lacquered and printed before pleating, or lacquered only, after pleating. The writer has also produced some stylish and inexpensive outer packings. His first licensees are Messrs. Robel of Paris, who have decided to pack their creams in these tubes."

HEALTHY PERISTALSIS: According to William Douglas McAdams, Eno advertising agent, "wild claims are not only dangerous to the public but they serve to discredit the entire field of advertised products" and it is high time the public is told just what a product can and cannot do. We don't want to develop a nation addicted to the laxative habit. We want to build sound health. All a laxative can do is to pave the way for a healthy peristalsis."

In line with this reasoning, Eno advertising is "to take the lead in a swing toward understatement and credibility." In the new Eno series, "head-holding" Johns and Marys are abandoned in favor of bright, healthy men and women swinging along at a brisk gait, "hitting their stride." This ties in with Eno's new theme song, "You've hit your inner stride," which is followed by the sub-heading, "when you regain healthy per-i-stal-sis."

Although the term "peristalsis" is commonly used by medical authorities, it rarely appears in advertising. Better known than "halitosis"—when that first appeared in copy—it has not, up to now, been featured, says Eno.

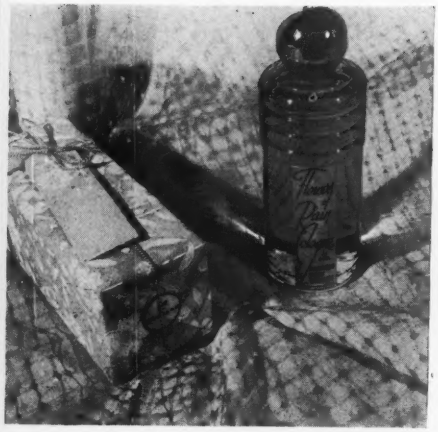
Eno has restricted its claims to an accurate description of what the product will do. It will "*help clear the way for healthy peristalsis!*" It does not claim to restore regularity.

Eno's alkalizing effect is given secondary position.

"FASHION TONES:" Costume colors, individual skin tones and cosmetic shades have been brought all together in a new theory of make-up created by Alexandra de Markoff, which is called "Fashion Tones." Not only is the new make-up keyed to the season's fashion colors, but also according to blond, brunette and medium types. Thus each one of these types wearing the same color blue will wear a different make-up especially suited for her individual skin tone. For instance, with pearly grays, coral, pink, dusty pink, marine blue, black, etc., the blond will choose Rose Camelia, the medium type, Red Camelia, and the brunette Scarlet Camelia. With blues which contain red, from periwinkles to purples as well as wine reds and violet, there is Rose Peony for the blond, Red Peony for the medium, and Scarlet Peony for the brunette, and with yellows, camomile, mimosa, cafe au lait, tobacco, clay, chartreuse, greens, etc., there is Flame Marigold for the blond, Gold Marigold for the medium, and Sunset Marigold for the brunette. This interesting range of cosmetic colors is available in an ensemble of lipstick, cream rouge and face powder, with eye shadow in three shades, making a total of thirty cosmetic items involved in this make-up plan. The rouge and eye shadows are packaged in attractive clear plastic cases, and the lipstick case is a brilliant wine color with a transparent cover, so that the name and tiny crown stand out in bold relief against the wine.

EYE TREATMENTS: We have received a letter from the Louise Norris Co., Kansas City, Missouri, which reads as follows:

"In your last issue, page 312, you have a description of an eye treatment stating that this appears to be the first complete eye beauty regimen with emphasis upon therapeutics rather than make-up. For your information we have specialized in preparations for the eyes for sixteen years and have, for the past six years had a complete eye treatment ensemble."



KATHLEEN MARY QUINLAN

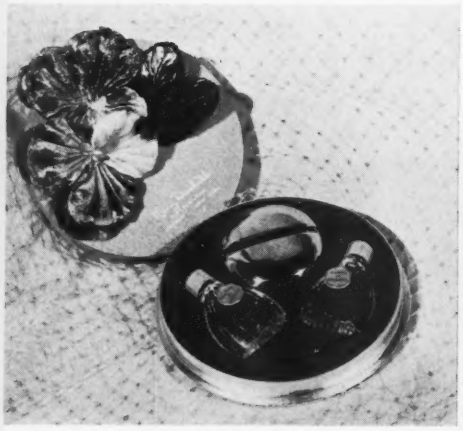
COLUMBIA PRODUCTS CORP.

ANN HAVILAND

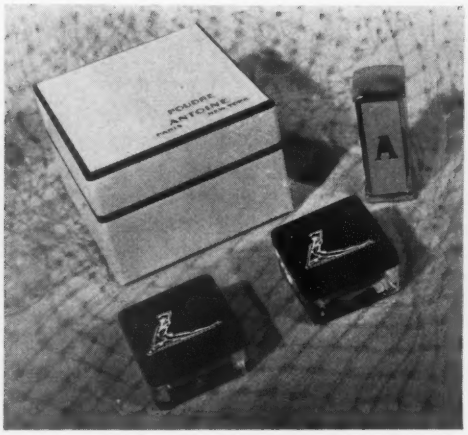
LUCIEN LELONG

ARDS-LEA CO.

VALDOR

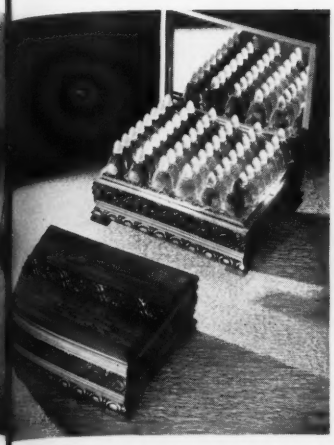


MARY DUNHILL



ANTOINE

D'ORSAY



BENJAMIN ANSEHL

ALLEN B. WRISLEY

GLAZO

KATHLEEN MARY QUINLAN

Kathleen Mary Quinlan Colognes and bath powders are presented in special "dressy" packages for Mother's Day and other spring gift-occasions.

COLUMBIA PRODUCTS CORP.

The Columbia Products Corp. has introduced "Eye-Peps"—masques shaped to fit the eyes and saturated with a lotion which is said to help make tired eyes look and feel fresh.

ANN HAVILAND

Ann Haviland, creator of perfumes, has designed an attractive line which includes perfumes, dusting powders, Colognes and sachets, of which Jay-Thorpe will be sole distributor.

BENJAMIN ANSEHL CO.

The Benjamin Ansehl Co. is offering Vivani perfume in three odors: Reverie, Ecstacy and Intrigue. The bottles have an attractive sunburst design and are capped with closures in pastel shades of yellow, pink and green, the color of the label matching that of the cap. The bottles are packed in a handsome carved wood vanity box, and by following simple instructions are displayed in the manner shown in the photograph. The retailer may sell the empty vanity box at a suggested price of $2.50, or award it to one of the purchasers. Bottles by Carr-Lowrey Glass Co.

M.V.C. LABS.

The "Klenale" 1 1/2 oz. jar of hand cream is a new venture for M.V.C. Labs. in the cosmetic field. The clear glass container has flutings that pick up and reflect the color of the contents. It has a pedestal base that gives the jar somewhat of a vase design. Jars produced by Owens-Illinois.

LUCIEN LELONG

Lucien Lelong has introduced sachet in five of his fragrances, Impromptu, Indiscreet, Mon Image, Opening Night and Whisper. The sachet is highly concentrated and comes in a handsome crystal bottle with gold cap.

ARDS-LEA CO.

The Ards-Lea Co., has created "Flora-Fome," a foaming milk bath. It affords a luxurious foaming bath, softening and perfuming the water and it is said to possess the additional quality of cleansing without the use of soap.

VALDOR, INC.

Valdor, Inc. has introduced "Don Juan" lipstick in this country. It has achieved success throughout France, England and other countries under the name "Guitare." Don Juan lipstick in an all-black moulded case, set off by a white medallion, comes to retailers packed in a box containing one dozen.

ALLEN B. WRISLEY

Wrisley's newest offering for Spring is a fragrant Cologne which comes in a handsome milk-white hob-nailed bottle, topped with a large wooden stopper.

FABERGÉ, INC.

Fabergé, Inc., has introduced a new bath oil in the worldly Aphrodisia fragrance. According to Fabergé, this condensed oil version of the fragrance is so potent that only a few drops are needed to perfume and soften the bath water—hence each bottle is provided with a dropper.

MARY DUNHILL

Mary Dunhill's attractive presentation for Mother's Day is the pansy gift set. It contains two flacons of perfume, Frou Frou Gardenia and Flowers of Devonshire, with a perfume purse container, all neatly packed in an orchid box decorated with a handsome cluster of pansies.

ANTOINE

Antoine is presenting "Primeur '39" make-up this Spring, instead of bold colors. It is a pure pink—deep and rosy for the lips, lighter for the cheeks, blue-green to shadow the eyes, and a pastel powder.

D'ORSAY

For summer promotions, Parfums D'Orsay is announcing a special "Get Acquainted" package of its Eau de Cologne "90" and Eau de Cologne Ambree in 8 ounce sizes.

GLAZO

Glazo nail polish is making its appearance this season in a new package. The container is pebbled glass, and the label in French blue, powder blue and carmine red adds a fresh, modern and feminine appeal to the entire package.

TONE

Tone now offers its conditioning cream, regular, special and extra rich, in tube form, in addition to the facial soap cream and cleansing cream.

M. V. C. LABS.

FABERGÉ

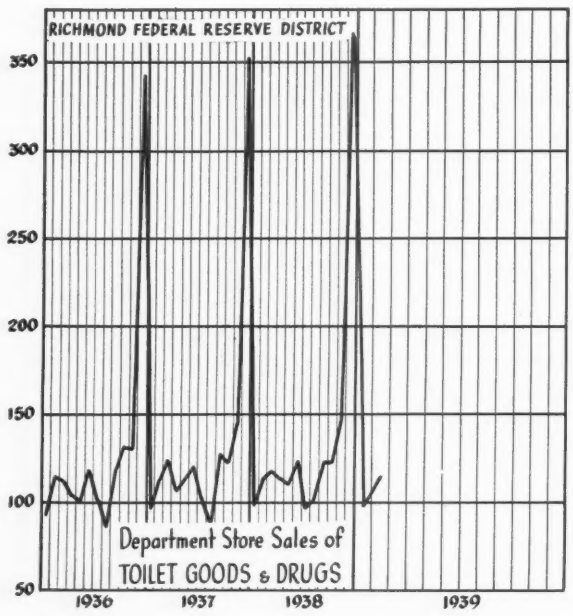
TONE

ADD SURVEYS: This Scripps-Howard bunch seems tireless when it comes to making surveys. They have now added Memphis to the 16 cities previously surveyed. Of the families studied in Memphis, 48 per cent. are reported to use mouthwash, 35 per cent. tooth powder and 69 per cent. tooth paste. The 16-city average for tooth paste was 65 per cent.; for tooth powder, 64 per cent.

CONTESTS: Elsie Rushmore, our favorite contest expert, points out that the purpose of contests is not to see "How big a contest we can pull off" but "What will be the result to our business next week, next month, next year?" Writing in *Printers' Ink* she says that the following are the factors that guarantee a successful contest:

1. There must be good distribution of the product in the territory covered by the contest.

2. The qualifying enclosure must not cost more than 25 cents (preferably less) and be easy to enclose. If the contestant has to hunt around the stores to find the product, pay more than 25 cents for it, either soak or pry off a label, and mail a clumsy enclosure, then the postman can probably deliver the entire contest mail in one hand three days before the closing date. The smallest complication will bring the total tumbling down, and disqualify a large percentage of the entries actually received.



Sales of toilet articles and preparations by department stores in Baltimore were 3 per cent. less, in Washington were 5 per cent. greater and in the whole Richmond Federal Reserve District averaged 2 per cent. greater for February 1939 than in the same month of 1938. The unadjusted index numbers for the whole district were 114.1 for February 1939, 98.9 for January 1939, and 111.9 for February 1938.

3. The rules must be absolutely simple and obviously fair. If printed they must be in legible type, and if announced over the air they must be given slowly, repeated frequently, and printed for distribution on request. Only one contest should be run at a time, and on one program-series only.

4. The prizes should, if possible, be money, and their number should have some reasonable relation to the probable volume of returns.

5. The media coverage should be sensible and adequate.

6. Mail should be handled with scrupulous care, all correspondence should be answered, and announcement of winners should be as prompt as possible. When the manufacturer is running a series of contests, acknowledgment of entries by postcard, though expensive, is a real help in building up returns. The list of winners should be published or be available on request.

7. The contest should have some real human interest.

Endocrine Compounds

(*Continued from page 425*)

trol. A final decision as to which of these theories is most accurate and acceptable cannot at present be made. Obviously, then, it is not yet possible to draw final conclusions concerning the function of cortin, although the evidence associating it with sodium metabolism appears to be more well-defined than that limiting its function primarily to the control of carbohydrate metabolism. There is the possibility of more than one unrelated function, and of more than one active principle of the cortex.

The fact that cortin does not prolong the survival period of guinea pigs placed on a scorbutic diet suggests the possibility that vitamin C, ascorbic acid, is necessary in adequate amount for the normal function of cortin.

Hartman, following his work with adrenalectomized rats, concluded that there is a second active principle of the adrenal cortex which is concerned with lactation; this he calls *cortilactin*. Looney and Darnell claim to have isolated from the adrenal cortex a substance which produces, after extended oral administration, a prolonged rise in blood pressure. They have shown that its solubilities do not resemble those of cortin, and that it is not epinephrine. They have suggested the name *cortipressin*.

Addison's disease is the principle condition associated with hypofunction of the adrenal cortex. That deficiency of the active principle of the adrenal cortex is responsible for at least most of the symptoms of this disease is obvious when the conditions presented by this disease are compared with those which follow double adrenalectomy in animals, and when it is recalled that destruction of the adrenal medullas has no significant sequence.

ADMINISTRATIVE PROBLEMS

THE REQUIREMENT THAT DRUG PRODUCTS carry on the label the names of the active ingredients is something that is causing concern. The FDA has, on occasion, objected to an ingredient being mentioned on the label because it was present in too small an amount to be effective, in their opinion. Under these circumstances the FDA stated that the product was misbranded. An expert on the subject recently stated that in his opinion the best was to list all the ingredients on the label, not specifying which are active and which are not. In this way the requirement of listing the active ingredients would be fulfilled, and there could be no misbranding charge. But this expert would go still further and give the quantities of each ingredient on the label. In this way the active ingredient requirement would be satisfied, and also the requirement of giving the quantities of ingredients mentioned in the act, without anyone not well acquainted with the act knowing which are required and which are not. In other words, the act is fully complied with, but confusion results.

But the great protection to a manufacturer who puts his entire formula results from the fact that when he does this, the Federal Food, Drug, and Cosmetic Act itself protects this manufacturer against imitators. For 502 (i) (2) of the act declares a drug to be misbranded "if it is an imitation of another drug." Therefore by giving complete information as to the ingredients of a product, the manufacturer places upon the FDA the responsibility of protecting his product against imitators.

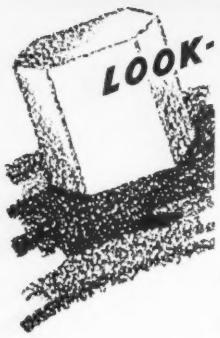
PERHAPS THE ACTIVE INGREDIENT declaration upon the label will help some few people, but the vast majority of consumers of drug products will not have any idea what the things on the label mean. Certainly the average individual knows very little about botanicals and probably less about organic chemicals. Even the layman that has some knowledge in these directions is not acquainted with a very long list.

AND SPEAKING OF ACTIVE INGREDIENTS, many manufacturers are apt to go astray in not considering as active some of the ingredients that really are active. Certainly petrolatum in an ointment plays a very active part, certainly talc, an ordinarily inert material, is active in foot powders and many other medicinal powers. There are many examples of ingredients being active, although the manufacturer might consider offhand that they are not active. Every ingredient of every product must be evaluated carefully before a decision is reached whether or not it must be listed on the label.

WHILE THE SEIZURE OF BROMO-SELTZER by the FDA as a product dangerous to health in the dosage recommended has shocked the industry, we think that the enforcement officials have shown real sporting blood by citing a real large company which will fight the case to the limit. B-C Headache Powders have also been seized under a similar charge as that of the Bromo-Seltzer case. It would seem that now we are to have a definite answer to the question of the safety of acetanilid and probably also to the question of the safety of bromides.

Bromo-Seltzer has been on the market for fifty years, yet the FDA saw fit to institute several seizures without any warning apparently being given to the manufacturer. The result of this was widespread unfavorable

Give *Your* Product a Chance !



REALLY LOOK — at *your* package for a minute. Does it make your product easier to use — like the Cotton Picker does *its* product? Does it reflect quality, distinction and exclusiveness in every line — like the single perfume package? Does it make your product easier to see (and buy) — like the transparent package? And has your package **display value** — like *all* those above?

If not, isn't it time for you to find out what Ritchie can do for you, too? There's no cost or obligation involved. Ritchie's modern, money-saving design and manufacturing facilities are at your service — your very prompt and complete service through nine nation-wide sales offices! Write for all the facts.

SET-UP PAPER BOXES
FIBRE CANS
TRANSPARENT PACKAGES

W. C. Ritchie AND COMPANY

8847 BALTIMORE AVENUE • CHICAGO

NEW YORK DETROIT CINCINNATI LOS ANGELES ST. LOUIS ST. PAUL DENVER HOUSTON

publicity for the product, publicity that it will be most difficult to undo even if the manufacturer wins complete vindication for his product. These constitute real rough tactics in the opinion of the industry in general, most people believing that some warning might have been given to the manufacturer so that he might have had an opportunity to discuss the matter with the FDA and arrive at an agreement without seizures and court action. It appears, however, that court action is what the FDA wants, probably in a real attempt to test out the extent to which they can go in enforcing the particular section of the law which prohibits products dangerous to health and to get a real answer to the question of acetanilid and bromides.

SO FAR AS CHEMICAL MANUFACTURERS are concerned, it appears that they have nothing to worry about with regard to the Food, Drug, and Cosmetic Act. By this we mean that if a chemical for use in a pharmaceutical or drug product is discovered, the chemical manufacturer can sell it to the drug manufacturer without any permit so long as the chemical manufacturer makes no claims for it. The attitude of the FDA is said to be that a chemical does not come under the act until it is talked about. In other words a chemical does not become a drug until someone starts pushing it for use in medicine. This seems like a sane viewpoint, and is probably the only one that can safely be followed. This rule will doubtless apply to all raw materials used for drugs and cosmetics.

WE ARE STILL ASKED QUESTIONS as to whether there will be any change in the requirement that active ingredients must be mentioned on the labels of drug products. These questions are generally asked by cosmetic manufacturers whose suntan lotions and hair tonics are now defined as drugs. We explain every time that this requirement is part of the law as enacted by Congress and signed by the President and that a change would have to be made in the same way. These people do not know the difference between the law and the regulations for enforcement, or if they do know the difference, they do not know what is in the law and what in the regulations. The regulations can be modified by the enforcement officials, but the law can only be modified by amendment by Congress.

SULFAPYRIDINE, THE CHEMICAL PRODUCT that is said to be the answer to pneumonia, is now being marketed by Merck & Co. under permission having been granted by the Food and Drug Administration after a rather long investigational period. The product, originally introduced in England by May & Baker, Ltd., is trade-marked here under the name Dagenan.

The introduction of this product into the market for use on physicians marks one of the outstanding actions of the FDA under the New Drug provision of the Food, Drug, and Cosmetic Act. Here is a product that was receiving wide favorable publicity in medical journals and in the daily press as a cure for pneumonia, but no one could obtain it due to the fact that the FDA had not permitted its distribution, even though the product was available in Canada.

An interesting sidelight on the product is that Dr. William E. Weiss, general manager of Sterling Products gave some to a physician in Florida because the physician has a boy very sick with pneumonia. Dr. Weiss told the doctor that he would never fear pneumonia again due to the existence of this product.

The warning statement on the Merck label of this product is interesting as an indication of what must be done under the new law. It reads:

"This drug may cause severe toxic reactions. Examine the blood daily for signs of anemia or leukopenia, and the urine for hematuria. Constant supervision of the patient is essential. Physicians consult the accompanying pamphlet. Irreparable damage may result from the use of this drug unless used under the constant supervision of a physician."

NO ONE KNOWS JUST HOW FAR THE FDA is going in the matter of drugs dangerous to health after the Bromo-Seltzer seizures and many manufacturers are clearly worried. Most worried are those manufacturers whose products contain either acetanilid or bromides. The fear is that the FDA might decide that some of these ingredients can be used only in products restricted to physicians' prescriptions in the manner of sulfanilamide, aminopyrine, and cinchophen. There seems to be no doubt that the FDA will seek to extend the list of products restricted to physicians' prescriptions as far as possible since they will want to prove that they are using their new powers in the proper manner. However, we believe that if they try to restrict to physicians' prescriptions products containing many of the common ingredients used over many years, they are doomed to a court fight in each instance, and they will be none too certain in advance as to how the court fight will be decided.

We imagine that organized medicine will give every aid to the FDA in such work, but many manufacturers have had real clinical work done with their products to determine the harmlessness of the products. The FDA will not find it an easy task to upset the evidence that the manufacturers will produce as it is based upon fact rather than on opinions such as the average physician advising the FDA is likely to have.

WHILE THE LARGE MAJORITY OF THE COMPANIES in this industry have been working hard and have their labels in shape for the effective date of the new Food, Drug, and Cosmetic Act, it is amazing to note the number of manufacturers who are of the belief that there will be a postponement of the

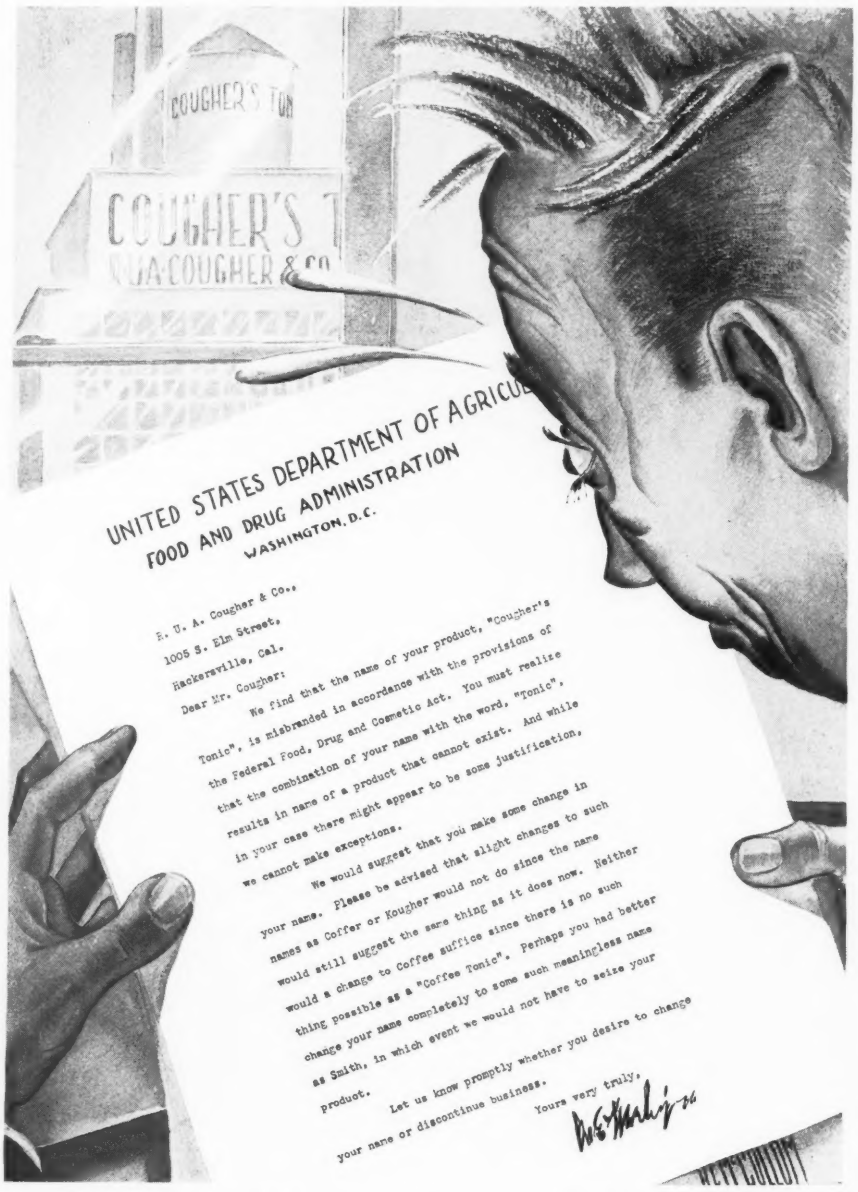
effective date of many provisions of the act. These people are taking their time in the hope that they can see what other people with similar products are going to do.

The fact of the matter is that there is a defect in the law regarding the matter of certified colors since colors cannot be certified until the act becomes fully effective on June 25, and since products on the market from June 25 on must contain certified colors. As regards this one point, it is possible that an amendment might be enacted by Congress extending the time when products must contain certified colors, but as regards other provisions of the law we do not know that Congress will grant any extension of time. And if Congress does not grant an extension of time by an amendment to the act, the FDA has no right to grant one although they doubtless will consider the extent to which manufacturers have gone in attempting to comply with the law.

ATTEMPTS TO POSTPONE THE EFFECTIVE DATE of the Food, Drug, and Cosmetic Act are under way. Charles Wesley Dunn, counsel for the American Pharmaceutical Manufacturers Association and the Associated Grocery Manufacturers of America, has been working with Congressman Lea to this end. The plan is not to postpone the effective date of the entire act but only as to certified color provisions and the informative labeling. This informative labeling is only with regard to warnings and not with regard to the ordinary information which must be given.

It appears doubtful that such a law will be enacted since the major part of the drug manufacturers are opposed to it as well as the Secretary of Agriculture. There is a fundamental objection to such a change. That is, if Congress postponed the effective date of the act, then the industry would be expected to be completely ready on the postponed date and the FDA would not be able to use tolerance. As it stands now, the FDA realizes that it must be tolerant and work out the enforcement of the new act gradually. We believe that this is probably the course to pursue.

The bill introduced to amend the law so that either quantity or proportion of narcotic drugs need be given instead of both, has met with the approval of all and will probably be enacted. As to the provision in the law that both quantity and proportion of alcohol must be given, Enforcement Chief Campbell is going to allow the percentage alone to be given. Also alcohol does not have to be mentioned on the labels of cosmetics and some of the leading manufacturers make no statement of it.


UNITED STATES DEPARTMENT OF AGRICU
FOOD AND DRUG ADMINISTRATION
WASHINGTON, D.C.
R. U. A. Cougher & Co.,
1005 S. Elm Street,
Hackersville, Cal.
Dear Mr. Cougher:
We find that the name of your product, "Cougher's Tonic", is misbranded in accordance with the provisions of the Federal Food, Drug and Cosmetic Act. You must realize that the combination of your name with the word, "Tonic", results in name of a product that cannot exist. And while in your case there might appear to be some justification, we cannot make exceptions.
We would suggest that you make some change in your name. Please be advised that slight changes to such names as Coffer or Kougher would not do since the name would still suggest the same thing as it does now. Neither would a change to Coffee suffice since there is no such thing possible as a "Coffee Tonic". Perhaps you had better change your name completely to some such meaningless name as Smith, in which event we would not have to seize your product.
Let us know promptly whether you desire to change your name or discontinue business.
Yours very truly,

" * | * —— —— | —— —— | * "

LEGAL ANGLES

By S. L. MAYHAM

FAIR TRADE RESEARCH

Much better than nothing though probably not the best is the plan of the Druggists Research Bureau to survey the effects of Fair Trade on the price structure. Dr. Ostlund has done some very fine surveys. Those which the Bureau did on drug store costs and profits some years ago were masterpieces and led to considerable confidence on the part of the industry in the Bureau's findings. However, it seems to me that when the public is to be convinced, a survey by somebody not directly under the control of the affected industries would be far more effective. The drug industry does not so greatly need to know whether prices are the same or lower or higher now than they were when Fair Trade went into effect. In fact the drug trade is pretty familiar with the situation already. A report by the Bureau indicating lower, or at least no higher, prices under the new laws would be hailed by the trade but would hardly serve to convince consumers in large numbers. It is the old story that testimony of the party charged with the crime, his relatives and his friends, usually needs some reasonably strong corroboration before the jury finds in his favor. I am sure Dr. Ostlund's surveys will tell the truth but I'm going to have a hard time convincing the consuming and purchasing part of my family of it.

LOSS LEADERS

New York State's loss leader bill, passed by the Assembly, is finding the sledding a little harder in the Senate. The bill bans selling goods below cost and calls for mark ups of at least six per cent. by the retailer and two per cent. by the wholesaler to "cover the cost of doing business." New York City's Merchants' Association is in strong opposition. Organized department store interests are also against the measure. Chances for passage are said to be not better than fifty-fifty. Should the bill be passed it will undoubtedly be attacked in the Courts as unconstitutional. Two reasons exist for such attacks. First, that the bill interferes with property rights of retailers in goods which they own through purchase. Second, that the discounts are discriminatory in that they make no allowance for differing costs and economies on the part of different individuals and corporations. Similar laws have been upheld and similar laws have been overthrown in various jurisdictions. It would seem that a more carefully drafted measure might have had better support and more chance of being sustained as valid legislation once it was enacted. This is said with criticising the National Food and Grocery Conference Committee whose pet measure it is.

INDIANA LEADS THE WAY

Indiana is the first state to bring its Food and Drugs Act into pretty close conformity with the new Federal statute. It is hoped that a large number of states will pass the model law of the industry and the Dairy Food and Drug Officials before the close of their legislative sessions early in the Summer. Meanwhile it is gratifying to know that if your labels pass the Federal tests, the goods can be sold in Indiana anyhow.

TRADE COMMISSION ON DRUGS

Apparently the Federal Trade Commission is taking its duties with reference to drug and cosmetic advertising a little more seriously since the Food & Drug Administration has begun to act diligently on labels and other matters under its jurisdiction. During the last month several drug citations were issued. Strangely enough they follow the lines of the new Food, Drug & Cosmetic Act pretty closely although there is nothing in the Wheeler-Lea Act which compells this sort of interpretation. Many, who were predicting a conflict between the two departments of government will be surprised to read recent citations by the Commission and are likely, if my scouts are correct, to be more surprised at some which are to come. One might even suspect Mr. Campbell of complicity in them if he didn't know that Mr. Campbell has something more than a full time job tending to his own knitting at the moment. For example, the Commission is proceeding against a fairly well-known product whose name contains the word "pepsin" on the grounds that there is not enough pepsin in it to justify that designation. It seems just possible that the Commission has been reading the new law and regulations which prohibit naming a compounded drug after one of its ingredients

The Commission is also using a method to which I have been opposed, namely that of injunction before final trial of the issues. Long ago, I pointed out that such a process could result in closing up a man's business before he had been proven to be guilty of anything at all. One Commission case recently has gone along just those lines. Some will undoubtedly eventuate from the new Food, Drug & Cosmetic Act once its earnest enforcement is begun. This is not good American law and it is worse morals than it is law. It should still be prevented by amendment although no one at the moment is agitating such action.

ENFORCEMENT DATE

June 25 is going to remain as the enforcement date for the entire Food, Drug & Cosmetic Act. There is practically no chance at all of Congress postponing it and Congress is the only authority which could postpone it. In my opinion the law should go into effect then. It is quite true that all the details of obedience will not have been worked out by June 25. Some probably won't be worked out for months or even years after that date. That was true of the Wiley law and has been true of many another restrictive statute. However, there are few cases of suffering on account of necessary delays in compliance. There is little chance that anyone will

suffer this time if he has and can show a reasonable reason, not merely an excuse, for not having been ready. On most points, there is no real reason for not having been ready despite the fact that regulations were somewhat tardy in making their appearance. On labeling, for instance, the law itself is pretty clear in the case of practically all products. No one need fear the results on the handful on which regulations really had to be awaited. Nor need anyone fear on the subject of certified cosmetic colors which brought about the great hue and cry for postponement. Really, a start of enforcement must be made when Congress prescribed it. There is no assurance that those who are too insistent on delay will be any nearer ready three or six months or even a year from June 25. Much as it hurts to make the confession, there are still a few drug and cosmetic houses who just don't want to conform.

SLACK FILLING

One Trade Commission case against a cosmetic house last month cited the company for "slack filling" face powders. Here the Commission, while quite within its legal rights, could well have awaited action by the Food and Drug Administration. The Drug Law is specific on slack filled packages. The Trade Commission Act covers it only vaguely under the heading of "practices deceptive" of the consumer.

BROMO-SELTZER SEIZURE

Having said a word or two on behalf of the Food & Drug Administration, it is perhaps pardonable to differ with it on another matter. Down in Atlanta, agents of the Bureau have seized a quantity of Bromo-Seltzer, the action having been taken, it is announced, under the new Food, Drug & Cosmetic Act. The product according to the Department is misbranded because it contains no warning to the effect that it may be dangerous when used according to the directions. The Act goes even further and says that, with or without a warning, a drug is misbranded if it is dangerous to health when used according to directions. It is, of course, well established that excessive or too long continued use of acetanilid or sodium bromide or both may do some harm. But the dosage of each in Bromo-Seltzer, when used in accordance with directions is according to some very good medical opinion a long way from the danger limits. No one can say that Mr. Campbell has chosen a push over for his first case involving this directional labelling question. In fact, he has taken on quite a toughie and I think he is going to take it on the chin when the case comes to court. Proof in this case is more likely to favor Bromo Seltzer than the F.D.A., unless of course the weird scribblings of the "Guinea Pig Boys" are taken as proof, and, in Federal court, this doesn't seem likely.

FAIR TRADE REPEALERS

Even at the expense of one's friends it is nice to be proven right. I hate to see Fair Trade repeal bills being vigorously pushed in several states, but consistent readers (if any) of this column will recall that it contained a prediction to that effect a long time ago and in the same paragraph made the suggestion that the industry seek a justifying reason for price maintenance which the public could understand and which the public would accept as valid. The public doesn't particularly care whether the manufacturer, the wholesaler or the little neighborhood retailer is making money or not. It does care what it pays for goods when it goes in to buy them. That is why the Macy advertising is effective. It is also the reason for Fair Trade repealers and to some extent for Guinea Pig Books. The way to consolidate Fair Trade is to bring out a reasonably plausible answer. Thus far, industry has completely failed to do that. Perhaps the various Fair Trade Committees, Bureaus, Research organizations and the like could spend a part of the funds now going to law enforcement of the negative sort on developing such an argument. I hate contests but a consumer contest on Fair Trade with real prizes is at least something to mull over in our spare moments.

LABEL CHANGES

I have seen some very fine label changes under the new law and some which were not so good. Two proprietary products whose new labels were submitted to me for criticism, made all of the necessary changes without changing the appearance of the packages or the labels themselves a single bit. A food product which I saw did the same thing. One or two cosmetic packages have not attained the same results, although, by the exercise of reasonable ingenuity, they might have done so.

Without being critical of my contemporaries, it might also be remarked that everything which appears in print regarding labelling requirements and all of the "suggested new labels" which are published from time to time, should not be taken as handed down from Sinai. It is pretty easy to be wrong on these questions and there is a lot of mis-information floating about here and there. Some of it occasionally appears in print. Many published suggestions are fine but further check and scrutiny is needed. Special warning should be given against accepting as Gospel all of the classifications of products which are close to the border between drugs and cosmetics. Many of these products are still cosmetics although certain authorities have deemed them to be drugs. A few are drugs which certain authorities think are cosmetics. Double checks for accuracy before final label adoption and printing are more than advisable. They are absolutely necessary if trouble and expense are to be avoided.

BREAKING COMBINATIONS

In an interesting case in Supreme Court, Justice Steuer of New York, held that a retailer could "break up" a combination package and sell the items separately. The decision further permitted the retailer to alter the labels, insofar as reference to the combination deal was concerned. Justice Steuer held that such changes were not deceptive to the consumer under the trademark law. The case was that of Pinaud, Inc., which sued to enjoin a druggist from breaking up its combination packages. Appeals have not been announced but this is a case involving an important factor in cosmetic merchandising, especially where sets and deals are concerned, and the decision should be carried through to clarify the situation.

ALCOHOL BILLS

The industrial Alcohol Institute and the newly formed Alcohol users group have their hands full with the flood of alcohol control and revenue measures now appearing in state legislatures from one end of the country to another. Many of these bills fail to contain the standard clause protecting the user of industrial spirits. The two organizations are doing a splendid job and Capr. McGovern is to be congratulated upon his alertness and efficiency. However, users of industrial spirits in all parts of the country should co-operate with him and help him in this work. Often, when such an outstanding job is being done, the tendency is to forget it and let it go along in competent hands. Where legislation is concerned this is a dangerous and sometimes fatal procedure.

CONVENTION TIME

I think that most of the program of the Toilet Goods Association convention at the Biltmore next month will be given over to discussion of the new Food, Drug & Cosmetic Act, the Wheeler-Lea Bill and the activities of the enforcement authorities who have these matters in hand. Of course, a good deal of the time, perhaps too much, will be spent in playing, what with the World's Fair, the golf tournament and one thing and another. Most of the industry members have a lot to learn about their new obligations to the government and the public on labels, composition of their products, definitions and other things. The convention will be a good place to begin the learning process. Unfortunately, the sessions won't be held at what was to be the Cosmetic Building at the Fair. Instead industry members and their guests will have to visit the Maison Coty and the fine displays which some of them will have in the Hall of Fashion. My prediction is that some who are not in will regret it.

F.D.A. and F.T.C. Activities

F.D.A. Action

New Law Seizures

Recent actions against cosmetics alleged to violate the dangerous to health provision of the new law include seizures of two brands of hair dyes containing coloring material alleged to be capable of injuring the user. Those seized were 37 packages of Lash-Lure and 49 packages of Posners' Black Hair Coloring.

Actions against drugs alleged to be dangerous and to violate the new law included 3 bottles of Cal-Co-Cin, a painkiller containing cinchophen; 488 packages of B. C. Headache Powders, 11,325 bottles of Bromo-Seltzer, and 3,526 packages of Stanback Headache Powders, all of which contained, among other ingredients bromides and acetanilid. Actions against devices held to be dangerous under the conditions of use resulted in the seizure of 2,922 nipple shields made of lead, and two brands of nasal irrigation outfits as follows: 68 of Nazoscope and 7 of Hedklear.

Old Law Seizures

During the last month seizures were made of numerous lots of drug and medicinal products alleged to be in violation of the 1906 law. These consisted of: 364 packages of absorbent cotton, 12 packages of dental absorbent points, 2,486 packages of gauze bandage, 329 packages of catgut sutures and 2 packages of obstetrical sutures, all of which were found to be unsterile; 119 gross of defective mechanical prophylactics were removed from the market as were 489 bottles of sub-standard and short-volume peroxide and hydrogen.

Two patent medicines were seized: 139 bottles of "Hy-Lo-Ex," a concentrated expectorant consisting essentially of water, sugar, sodium biphosphate and oil of lemon and 131 bottles of "Muscleflex Rubbing Lotion" incorrectly labeled as to alcoholic content; two brands of stock remedies consisting of: 8 cans of "Kalo Santonin Round Worm Expeller For Hogs," containing only a small portion of santonin, and 24,384 cans of Red Seal Lye bearing a label incorrectly representing the product as useful in keeping hogs free from worms.

Fines For Misbranding

The following fines were reported due to shipments of misbranded proprietary medicines: Strong, Cobb & Co., Inc., and T. S. Strong, Cleveland, Ohio, "Gay" a remedy, fine $25 against T. S. Strong and $50 fine against the corporation; Erie Laboratories, Cleveland, Ohio, proprietary remedies, fine $50; Don Gilmore Laboratories, Inc., Cleveland, Ohio, "Gilmores' Ointment," fine $25; Counts Chemical Company, Nashville, Tenn., "Counts Kill-Germ," fine $25.01 in lieu of fine and costs; Bowman Brothers Drug Company, Canton, Ohio, proprietary remedies, fine $25.00.

Hance Brothers & White, Inc., Philadelphia, was fined $25 for below standard pharmaceuticals; and Ralph Sachs, trading as Sachs Mfg. Company, Pittsburgh, was fined $25 and costs and placed upon probation for two years for a short volume olive oil and camphorated oil preparation which was also below standard.

F.T.C. Charges

F & F Laboratories

F & F Laboratories, Inc., allegedly represented that F & F Cough Lozenges, which are to be dissolved in the mouth, and F & F Cough Syrup, which is to be taken orally will ward off, prevent and check coughs, colds and sore and irritated throat, and that each is a competent and effective treatment for these ailments, when, according to the complaint, neither used alone or in connection with the other, is competent to treat or cure coughs, colds or sore or irritated throat. Use of the preparations in treating these ailments will not do more than afford slight temporary symptomatic relief, in some instances, according to the complaint.

No-No Germ Control Cited

Van Products Co., New Milford, N. J., who compounds and distributes No-No Germ Control, advertised as "an absolute germicide," has been cited by the F. T. C. The complaint alleges that through statements and implications respondent has represented that his product will kill all the germs in the human body, is an absolute contraceptive and that the vapors penetrate the hidden recesses of the body and kill germs that powders and liquids will not reach. The complaint declares these claims to be untrue and that the preparation is nothing more than a formaldehyde solution effective as an antiseptic rather than as a germicide.

Pancreobismuth Cited

Frye Company, Watertown, Mass., distributor of Pancreo Bismuth & Pepsin or Pancreobismuth has been cited by the F. T. C. The product is advertised as effective in cases of indigestion and "upset stomach"; and also as a digestant. The complaint asserts that the active ingredients of the preparation are sodium bicarbonate, bismuth subnitrate and ginger, and that use by respondent of the two trade names leads purchasers to believe that pancreatin and pepsin are active ingredients of the product. In truth, the complaint alleges, the amount of pancreatin and pepsin is negligible, having no physiological value.

Herbtex Claims

The F. T. C. has issued a complaint against James F. Cox and H. C. Elliotte, trading as Herbtex Co., 1200 Chapline St., Wheeling, W. Va., alleging that the respondents' product, Herbtex, was advertised as a cure, remedy or competent treatment for constipation, headaches, biliousness, stomach troubles, sleeplessness, run-down condition, nervousness, piles, sluggish-kidneys, backache, rheumatism, arthritis, neuritis, gout, and loss of appetite, and as being capable of cleansing, strengthening and stimulating the functioning of the stomach, liver, bladder, blood and bowels, when such were not the facts.

It is further alleged that, contrary to the facts, Herbtex was represented as being a world famous product compounded according to a doctor's prescription, and as being harmless for use. The complaint points out that the product contains potassium iodine, which would be definitely harmful to users having pulmonary tuberculosis, and that its use by goitre patients might induce or aggravate toxic manifestations.

Zo-Ak Tablets Cited

Zo-Ak Company, Inc., in the sale of Zo-Ak Tablets (blue label), or Zo-Ak for Men, and Zo-Ak Tablets (orange label), or Zo-Ak for Women, allegedly advertised blue label tablets as competent treatments for reduced virile powers and as capable of building up health and strength, and the orange label tablets as a remedy or relief for certain nervous symptoms, when, according to the complaint, such representations were misleading and untrue.

The complaint charges that the respondent failed to reveal in advertisements that use of its blue label preparation under prescribed or customary conditions may cause injury to health in some cases.

Hyral Cited

W. G. Clark and N. A. Dodge, who formerly traded as Hyral Distributing Co., with headquarters in Fort Worth, Tex.,

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THIS unretouched photograph shows clearly the added display value our No. 2800 black rod sponge applicator gives to a package. This black rod stands out in the liquid making the applicator more noticeable, thereby giving more sales appeal to your package.

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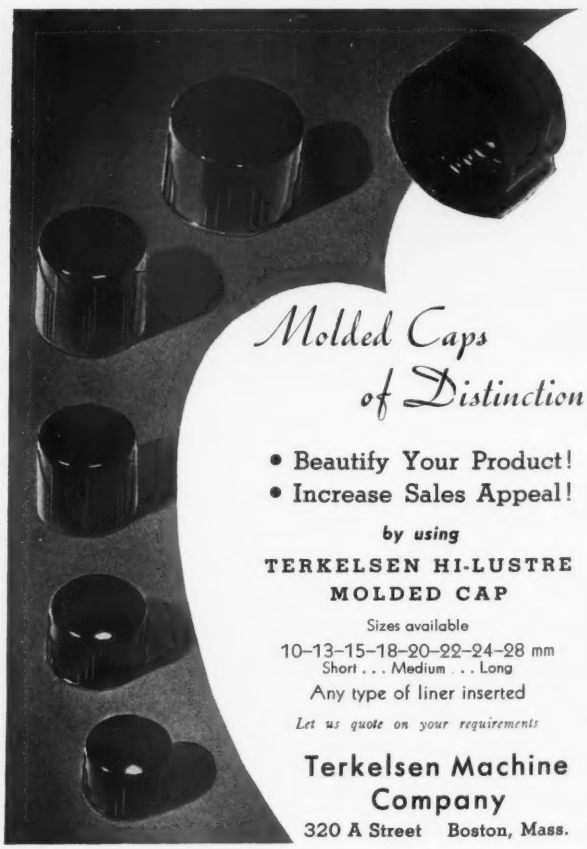

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are alleged to have advertised their product Hyral as a new and important discovery in the dental hygiene field, when in fact, according to the complaint, its ingredients have long been known to the medical and dental professions. They are alleged to have represented that the product will positively remove film and whiten the teeth, prevent pyorrhea and trench mouth, liberate oxygen in the mouth, and make the gums firm and healthy, when it is alleged such representations are misleading. Hyral Distributing Co. is charged with misleadingly representing that Hyral promotes oral hygiene, is the one sure way to obtain white and sparkling teeth; that it assures the user unobjectionable breath, and will prevent loss of teeth.

Restoria Cited

Harry Epstein, trading as Restoria Company, Milwaukee, is charged by the Federal Trade Commission with misrepresentation of "Restoria," sold as a treatment for the blood and a remedy for blood disorders. Bad blood, ulcers, eruptions, swollen glands, eczema, neurasthenia, rheumatism, syphilis, skin eruptions, and blood poisoning are among the ailments for which the preparation is alleged to be sold as a cure.

The complaint alleges that misrepresentations were disseminated by the respondent as purported testimonial letters. Claims that the preparation is manufactured in modern laboratories under expert supervision and is safe and harmless, and that its use will produce no bad aftereffects, also were alleged to have been made. The complaint alleges that these assertions are false and misleading and that the respondent fails to reveal to purchasers that use of the preparation by uninformed persons under conditions prescribed might cause injury to health.

Luxor Distribution

Discrimination in favor of certain purchasers in the sale of toilet and cosmetic articles in violation of the Robinson-Patman Antidiscrimination Act is charged against Luxor, Ltd., Chicago,

The complaint alleges that in the sale of its toiletries, two sizes of the articles, which include Luxor Complexion Powder, Luxor Rouge, and Luxor Cold and Cleansing, Vanishing and Foundation, Special Formula, Tissue and Hand Creams, are distributed. The sales price on larger sizes, as suggested by the respondent to retailers, is 55 cents. Smaller sizes of the same articles are alleged to be distributed for resale to the public at 10 cents.

Respondent designates the toilet and cosmetic products packed and mounted in smaller containers as "Luxor 10c Toiletries," and, the complaint charges, accords the facilities of small packaging and sales card mounting only to so-called novelty, v a r i e t y, syndicate and 5-and-10-cent stores. The respondent does not accord the same service facilities to other customers competitively engaged with the favored customers, it is alleged. The respondent's failure, the complaint continues, to accord the latter class of customers the same service facilities, has a tendency to cause competitive disadvantage to the latter class of customers.

Injunction Against Alcoban

Federal Judge John C. Bowen of the United States District Court of the Western District of Washington, issued, on petition of the Federal Trade Commission, an order temporarily restraining a Seattle chemical company, a sales corporation, and a drug company, from further disseminating advertising of a medicinal preparation, use of which, according to the petition of the Commission, might result in serious illness or death to the users.

The defendants are Western Chemicals, Inc., Maffett Sales Corp., and Bartell Drug Co. of Seattle, Wash. The corporations and individual defendants are manufacturers and distributors of "Alcoban," described in advertisements as being a safe and scientific treatment for alcoholism.

The procedure of the Commission in seeking an immediate court action where danger to human health or life is involved was taken under authority of the recent Wheeler-Lea amendment to the Federal Trade Commission Act.

Active ingredients of "Alcoban" are declared to be ephedrine hydrochloride, emetine hydrochloride, and pilocarpine hydrochloride. In affidavits from prominent physicians and analysts, each of these drugs is described as being in itself potent and powerful, and when combined, as in "Alcoban", to result in a compound which may have a marked toxic and sometimes fatal effect upon the human system.

Dr. K. E. Miller, senior surgeon in the United States Public Health Service, now assigned to the Federal Trade Commission as medical advisor, said in part concerning the drugs and their effect: "The drugs contained in this product do not, either singly or in combination, constitute a competent treatment for alcoholism." * * * "The action of ephedrine is quite the opposite of what is desired in the treatment of chronic alcoholism. It produces a nervous excitability characterized by tremors, insomnia, and an anxiety complex. Such manifestations would tend to aggravate, rather than alleviate, chronic alcoholism, as the natural impulse of the alcoholic would be to calm his 'nerves' with more alcohol."

Emetine hydrochloride, the affidavit said further, taken in repeated doses, might accumulate in the tissues, giving rise to toxic disturbances, and create a condition that might prove fatal, "particularly in persons such as alcoholics whose general resistance is at a low level." * * * "Among the dangerous possibilities from the use of pilocarpine, fatal oedema of the lungs is one of the most to be feared." * * * "In summary, it should be urged that none of the active substances in the 'Alcoban' formula is safe to be used by laymen in self-medication without competent and immediate medical supervision."

Dr. C. W. Knudson, a practicing physician of Seattle, and president of the King County Medical Society, testified in an affidavit, "The product 'Alcoban,' containing these drugs, will not have the effect of eliminating the alcoholic habit, except insofar as it will make a patient sick, and he thus feels the lack of vigor and attributes his condition to the fact that he has taken alcoholic drinks, and thus the patient may be discouraged from further drink." * * * "Affiant therefore s t a t e s that the product known as 'Alcoban', if it contains the drugs above mentioned, is dangerous to the human system and should not be given without the care of a physician."

"Gyp" Practices Cited

Shaving creams in containers bearing fictitious prices far exceeding true selling prices, and tooth paste with misleading descriptions as to its formula and manufacture, were cited by the Federal Trade Commission. Respondents are Marlborough Laboratories, Inc., Marlborough Sales Co., Inc., Madison Sales Corporation, and Windsor Manufacturing Co., Inc., all of 29 West 15th St., New York.

The complaint alleges that in catalogs, price lists, circulars and other printed matter, shaving creams distributed by the respondents have been advertised as being regularly priced at 75 cents and 50 cents, while they are sold to purchasers for resale at 7½ cents and 6 cents, and that the higher prices are wholly fictitious and in no sense representative of the true value of the merchandise.

A shaving cream distributed by the respondents is marketed, branded and described, the complaint charges, as "Palm and Olive Shaving Cream," in a package and container similar in size and appearance to Palmolive Shaving Cream, a widely known competing product, thereby confusing and misleading purchasers.

A dental cream bears the letters D. D. S. conspicuously on the container. The complaint declares that on closer inspection these are the first letters of the name Doctors Dentists Surgeons Dental Cream, instead of being an abbreviation of Doctor of Dental Surgery. Use of the letters, the complaint continues, leads the purchasing public to believe the tooth paste was compounded from the formula of a member of the dental or medical profession, or manufactured under such direction, when it was not so compounded or manufactured.

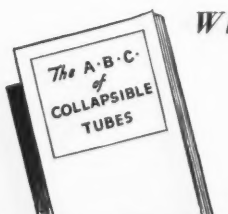
The respondents also are charged with designating certain of the shaving creams, tooth pastes and other drug and cosmetic products as being "giant size", although the containers hold no more than is ordinarily contained in such receptacles, and with packing ordinary size metal tubes in oversized paste-board containers.

Strength

Convenience, Beauty!

. . . all three, you will find combined, at most reasonable prices in STANDARD collapsible tubes, caps, applicator pipes and other specialties. Many years ago, STANDARD pioneered in making collapsible tubes and in applying decoration or printing thereto. STANDARD is still pioneering, creating better, more attractive tubes to meet specific requirements.

How strong should a tube be? What type and size of neck, spout or tube opening would best suit your product? What kind of material would be most serviceable and economical? . . . By helping manufacturers to find the best answers to many such questions, we are also building a better business for ourselves. The question now is:



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Our ***CHIEF BUSINESS*** is the creation of unusual, sales-stimulating, folding boxes. • Now, because of the needs of today, we are offering our customers this PLUS counsel service. • • A letter outlining your carton problems will be promptly handled.

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F.T.C. Stipulations

Hair Tonic Claims

The S & S Hair Tonic Company, Lexington, Ky., agrees to cease representing that use of its preparation will change hair color other than by dyeing or covering the hair shaft; that it feeds the hair roots or is of value in promoting healthy hair and scalp or in treating dandruff, or is a hair tonic.

Regens Modifies

John B. Daniel, Inc., trading as Regens Laboratory, 76 Central Ave., S. W. Atlanta, agrees to cease advertising that Regens, a nerve preparation, will afford relief from and control nervousness and will enable the user to enjoy natural rest or sleep, and that it is the most effective preparation of its type. The respondent admitted that its claims were not justified by the facts.

Keystone to Stop Claims

Keystone Laboratories, Inc., 491 South Third St., Memphis, trading as Memphis Mail Order House, Curio Products Company and White Line, will discontinue representing that Poreen Ointment, La Jac Lovin' Pink Cream for Dark Skins or La Jac Orange Beauty Glow Cream are skin foods or skin whiteners; that other of its products eliminate wrinkles; that La Jac Brite Skin Bleach will overnight, or in any stated time, make the skin five shades lighter or that Lucky Mojo, Good Luck Incense, Hindoo Mystic Love Perfume, Holy Oil with Live Loadstone or High John the Conqueror Root and other similar products bring good luck, love, romance, power, life, inspiration, easy money or irresistibility.

Valmor Claims To Stop

M. G. Neuman, trading as Valmor Products Co. and Famous Products Co., 5249 Cottage Grove av., Chicago, in his stipulation, which is supplemental to one accepted in May 1933, agrees to cease representing that he manufactures 500 or any number of products in excess of those actually made in his plant; that the bleaches he sells are safe or enable the user to have soft smooth skin; that the respondent's skin lightener is double quick in action and that his salesmen can earn $600 or any certain amount, except that the publication of actual earnings with statements of true circumstances is not prohibited. Neuman sells various articles, including Triple Action Hair Strength, Sweet Georgia Brown Bleach Cream, Brown Skin Beauty Cucumber Lotion, Paris Girl DeLuxe Perfumes, Valmor Corn Knocker and Valmor Red Clover Compound. He agrees to stop using the trade name designating his lotion as "cucumber lotion" unless it contains a substantial amount of cucumber juice or extract.

Calirad Claims Modified

Bayer Company, New York, has entered into a stipulation with the F. T. C. to discontinue misleading representations in the sale of Calirad Wafers.

Having advertised its product as being capable of causing one to have normal weight, control his weight or lose any desired amount of superfluous weight when used in connection with a dieting or exercise program, respondent now agrees to discontinue these representations. It also agrees to cease asserting that every human being is born calcium poor or that a great majority are deficient in calcium and phosphorus, which the respondent's product is said to supply, and that by using its advertised method of weight reduction one cannot fail to improve the figure where such improvement is desired.

F.T.C. Orders

Hair Marvel Claims Stopped

Robert C. Taylor, trading as Marvel Products Company, Hazel Park, Mich., has been ordered by the F. T. C. to cease representing that "Hair Marvel", one of the hair and scalp lotions distributed by him, is other than a hair dye and that it does not have the detrimental qualities usually attributed to hair dyes.

Findings of the Commission are that while Hair Marvel is advertised as "effective in stimulating the growth of new hair," in "eradicating dandruff" and "restoring the scalp to a natural healthy condition," it possesses none of these qualities. Ingredients of the formula of Hair Marvel comprise glycerin, bay rum, ammonia, choloride of sodium, precipitated sulphur, lead acetate, perfume and distilled water. Lead acetate, the findings state, is an accumulative poison which may prove harmful under some conditions of its use.

Respondent must cease representing, through use of the word "laboratory" that he operates or controls a scientific laboratory, employs trained scientists and technicians and is equipped to test his products in the manner and with the methods used by recognized scientific laboratories; and that he cease representing that his preparation is not a hair dye; that it will stimulate growth of hair or rejuvenate, invigorate or nourish roots of the hair; that it will stop falling hair or that it is an effective cure for certain scalp diseases and possesses germicidal or antiseptic properties.

Magnespirin Claims Stopped

F. T. C. has ordered Voss Company, Inc., 505 Court St., Brooklyn, N. Y., to discontinue misleading representations in the sale of its product Magnespirin tablets, consisting of both aspirin and magnesium oxide.

Respondent must cease representing the preparation as a new discovery, findings showing that it has been on the market since 1929.

Other representations to be discontinued are that Magnespirin is superior to or will give quicker relief than ordinary aspirin; that it counteracts toxic effects or will stop all pain, and that it is a remedy or cure for acid conditions, headaches, neuralgia, neuritis, sleeplessness, nervousness or colds.

The order also prohibits the representation that the preparation is unqualifiedly safe for use. Findings are that it cannot be indiscriminately used with safety because of the aspirin ingredient to which many persons are allergic.

Swamp & Dixie Claims

Swamp and Dixie Laboratories, Inc., is ordered by F. T. C. to cease disseminating false advertisements concerning Swamp Chill and Fever Tonic and Dixie Fever and Pain Powder. The tonic is not to be represented as a safe, certain and permanent cure for malaria or every kind of fever and ague, nor as being a general tonic or effective treatment for colds, chills, poor appetite and rundown condition. The powder is not to be represented as a safe remedy or treatment for sleeplessness, neuralgia, rheumatism, influenza and all kinds of fevers. Respondent must state in its advertisements that neither the tonic nor the powder is a wholly safe drug to be used by laymen in self-medication.

Syrup Pepsin Name

Dr. W. B. Caldwell, Inc., Monticello, Ill., manufacturer of Dr. Caldwell's Syrup Pepsin, Syrup Pepsin, and Syrup of Pepsin, has been ordered by the Federal Trade Commission to cease misrepresentations as to the efficacy of its preparations for the relief of constipation and other ailments.

The order prohibits use of the word "pepsin" alone or in association with other words to describe a preparation not containing sufficient pepsin, as an active ingredient, to possess substantial therapeutic value because of the pepsin content.

The respondent corporation is forbidden to represent that doctors and hospitals prefer liquid laxatives, unless such representation is qualified by an equally conspicuous statement that any such preference is limited to those cases where diagnosis of the disorder and the patient's reaction to various types of laxatives indicate that the use of a liquid laxative is preferable.

Use of any term or name to describe preparations containing senna and cascara sagrada as active ingredients, which name or term conceals or deceptively minimizes the presence of such ingredients, is also forbidden.

NEWS

Associations

A. D. M. A. Meeting

The twenty-eighth annual meeting of the American Drug Manufacturers' Association will take place May 1 to 4 at the Homestead, Hot Springs, Va. As usual, the first day will be given over to the meetings of the Scientific, Pharmaceutical, and Biologic Sections. The first general meeting being held on the second day at which session the president's report and many important committee reports will be given. The third day will be given over to the balance of the committee reports, and the fourth day will be given over to the Committee on Sales and Advertising.

The Scientific Section has many important reports planned. The Vitamin

DR. JOHN F. ANDERSON

Assay Committee under the chairmanship of Dr. A. D. Holmes, will report on "Vitamin B Assay Method and the Results of Studies of Biological Methods for Riboflavin Assay." Also a special committee of which Dr. Charles L. Barthen is chairman, will report on "A Collaborative Investigation of the Spectrophotometric Method for Assay of Vitamin A." Dr. E. M. Nelson, Chief of the Vitamin Division of the Food and Drug Administration, plans to attend the sessions.

The Subcommittee on Analytical Assay Methods under the Chairmanship of R. J. Fosbinder, in collaboration with the Committee on Vitamin Assay has been studying the chemical estimation of thiamin and a preliminary report of the work done in the laboratories of fifteen member firms will be given.

Another very important report will be that of a special subcommittee headed by Dr. John F. Ross, of Mallinckrodt Chemical Works, on "A Survey of Packaging and Storage Requirements for U.S.P. Chemicals and Suggestions for Modifying and Improving Directions for These Requirements."

Other committee reports to be given in the Scientific Section are: Alkaloid and Drug Standards, Dr. F. O. Taylor, Chairman; Chemical Tests and Standards, L. A. Watt, Chairman; Crude and Milled Drugs, W. J. Stoneback, Chairman; Digestive Ferments and Glandular Products, Frederic Fenger, Chairman; Drug Extracts, F. E. Ribbins, Chairman; Pharmacological Assays, Paul S. Pittenger, Chairman; Synthetic Organic Chemicals, E. H. Volwiler, Chairman.

Reports of the Pharmaceutical Section will include: Pharmaceutical Contact Committee; Catalogue Simplification Committee, Ward J. Rice, Chairman; and Committee on Hydrogen-Ion Concentration, F. W. Heyl, Chairman.

The Entertainment Committee, under the Chairmanship of V. E. Williams, of Monsanto Chemical Co., New York, is arranging an excellent program ending with the annual dinner on Wednesday evening. Other members of the Entertainment Committee and their assignments are: W. D. Barry, Mallinckrodt Chemical Works, New York, Vice-Chairman; banquet, F. J. McDonough of New York Quinine & Chemical Works, Brooklyn; evening entertainment, W. D. Barry; golf tournament, Herman J. Dietel of Merck & Co., Rahway, N. J.; ladies events, A. A. Wasserscheid of Mallinckrodt Chemical Works, New York; publicity, Gerald S. Furman, of Merck & Co., Rahway, N. J.; tennis tournament, S. Barksdale Penick, Jr., of S. B. Penick & Co., New York; transportation, Robert B. Magnus, of Magnus, Mabee & Reynard, Inc., New York.

Packaging Institute Formed

The organization of "Packaging Institute," an amalgamation of the Packaging Machinery Manufacturers' Institute and the Production Managers' Association has been announced.

While each association will continue to function individually, as in the past, meeting to discuss problems pertinent to their own interests, joint meetings will also be scheduled to foster, improve and abet the status of the packaging industry as a whole. One of the objectives of the "Packaging Institute" will be to "formulate constructive publicity designed to educate the general consumer on the benefits to be derived from good and effective packaging."

The president of the Packaging Machinery Manufacturers' Institute, H. H. Leonard, president of Consolidated Packaging Machinery Corp., Buffalo, and the president of the Production Managers' Association, William Bristol, Jr., vice-president of Bristol-Myers Co., Hillside, N. J., state that a new directorate and new officials for the Packaging Institute will shortly be announced.

A. Ph. A. Meeting

The eighty-seventh annual meeting of the American Pharmaceutical Association will be held August 20 to 26 at the Biltmore Hotel, Atlanta. The local secretary for the meeting is Robert C. Wilson and the committee chairmen are: banquet, L. M. Camp; entertainment, C. H. Evans; finance, T. C. Marshall; house, D. W. Leary; publicity, R. D. Rainey; reception, R. C. Wilson; registration, L. R. Brewer.

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ALCOHOL NEWS

April ★ A Monthly Series of Technical Articles for Chemists and Executives ★ 1939

Tells How Storage Of Perfume Ingredients In Alcohol Improves Aging

NEW YORK, N. Y.—Perfumers should store higher fatty aldehydes, such as C_7 to C_{12}, in 10% or even 50% alcoholic solutions to prevent their auto-oxidation, according to an article appearing in a recent issue of *Schimmel Briefs*. Although there is some reaction between the aldehydes and alcohol, this, it is claimed, is not detrimental to the odor.

As a matter of fact, the article points out, a close understanding of this process is an adjunct in compounding perfumes. All aldehydes containing a methylene group tend to form half-acetals when mixed with alcohol. By taking advantage of this in maturing the perfume, the equilibrium stage is reached and the necessary homogeneity is attained.

Other changes that take place in perfumes upon storage are discussed in the article.

Urethane Aids Varicose Veins In Pregnant Women

DUBLIN, Ireland—Use of quinine-urethane injections for the treatment of varicose veins in pregnant women was followed by "satisfactory results" in 97% of the cases selected, Dr. E. Solomons of this city reports in a recent issue of *Journal of Obstetrics and Gynaecology of the British Empire*.

Injection of 2 cc. doses of a solution consisting of 0.266 grams of quinine chloride and 0.133 grams of urethane did not affect the pregnant uterus in the 60 women under observation according to Dr. Solomons.

(A refined grade of URETHANE is now available from U.S.I. in limited quantities for testing purposes. Write to U.S.I. for samples.

Baltimore Office at Plant

U.S.I.'s Baltimore office is now located at the Company's manufacturing plant in the Fairfield section of Baltimore. The new mail address is Box 326, Baltimore, Md., and the telephone number is Curtis 0863.

New Alcohol Antiseptic Speeds Healing of Spain's War Wounded

Mixture Resembling S.D. Alcohol Requires Method Simpler and Less Discomforting to Patient Than Carrell-Dakin Technique

How war-torn Spain became the proving ground for a new type of alcohol antiseptic is revealed for the first time in *Military Surgeon*, official publication of the U. S. Association of Military Surgeons. Adding weight to the report is the fact that its author, Major S. Perez-Vasquez, M.D., was physician in charge of the famous Hospital de Carabineros in Madrid.

The new alcohol antiseptic which Dr. Perez-Vasquez found to be the "most satisfactory of any preparation in general use" may have even wider application in peace. He writes that, on war wounds of all types, it not only controlled infection with less discomfort to the patient, but also speeded healing and shortened the period of hospitalization.

Favorable to Granulation

"Even when . . . used several hours after injury, a quick drop in fever is observed, and within four days after beginning treatment, healthy granulation tissue appears. Much less operative surgery was required."

The new antiseptic—a mixture of ethyl alcohol, glycerine, thymol, phenol and camphor—was evolved by Dr. Perez-Vasquez and his associates in an effort to find a solution which could be used with simple irrigation in place of the cumbersome technique and specialized apparatus of the Carrell-Dakin method.

It was perfected, Dr. Perez-Vasquez states, after a careful trial of other approved and generally used antiseptics including iodine, and several proprietary products.

Easily Prepared

Directions for preparing the mixture are given in the *Military Surgeon* along with the following formula:

Phenol crystals	4 grams
Camphor	3 grams
Thymol crystals	1 gram
Glycerine (double distilled)	10 cc.
Ethyl Alcohol 96% qs. ad. (to make)	100 cc.

In rare instances where a hypersensitivity of the tissues against phenol is observed, it is suggested that 20 cc. of ether be substituted.

Solid ingredients are triturated together in a mortar until liquified, and then alcohol and glycerine added respectively. Ampoules of 10 cc., 20 cc., and small bottles can be easily and safely transported to emergency stations

(Continued on next page)

Indiana's New Drug Act Is First Based on F.D.A.

INDIANAPOLIS, Ind.—Drug and cosmetic manufacturers throughout the country are studying Indiana's new drug law, reported to be the first state act based on the Federal Food, Drug and Cosmetic Act. It is believed that a number of other states will enact similar laws.

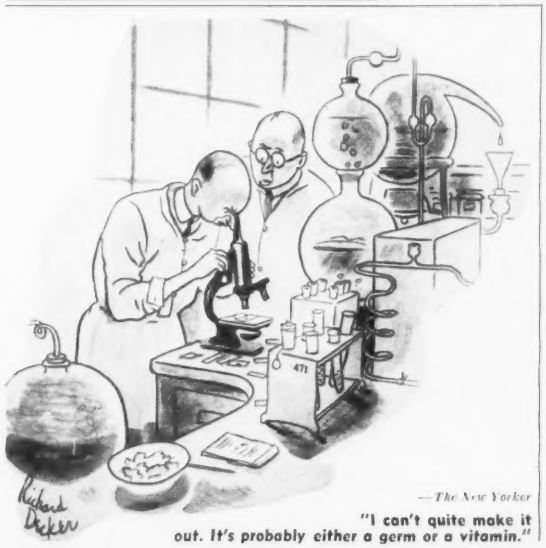
The "dangerous drug" and "new drug provisions of the Indiana law became effective immediately, whereas the registration provisions are effective April 6 and other provisions do not become law until March 6, 1940.

A ready-reference vitamin chart defining all the standardizing units in current use as well as approximate equivalents and conversion factors may be secured free of charge by writing to U.S.I. Ask for Bulletin 120.

Skin Is Medicated With Protective Resin Film

DETROIT, Mich.—What may prove to be a valuable treatment for "athlete's foot" is in the form of an unusual skin ointment recently announced here. Containing a synthetic resin dissolved in ethyl alcohol, it leaves a waterproof, protective film which holds keratolytic and fungicidal elements in prolonged and intimate contact with the skin, according to the announcement.

Its composition was made known as follows: salicylic acid 2%, benzoic acid 2%, malachite green 1:10,000, a synthetic resin and 75% ethyl alcohol. The kind of synthetic resin was not disclosed.



—*The New Yorker*

"I can't quite make it out. It's probably either a germ or a vitamin."

Determines Vitamin E in Wheat Germ Oil By Red Color Produced With Nitric Acid

BASLE, Switzerland—A new, rapid colorimetric method for determining the amount of vitamin E (the anti-sterility vitamin) in wheat germ oil and other oils without previous saponification or concentration is revealed in a recent issue of *Helvetica Chimica Acta*.

As little as 0.2 mg. of alpha-tocopherol (vitamin E) and other tocopherols can be determined by the specific, deep red coloration they give with nitric acid, it is claimed.

The determination is carried out by dissolving a 1 to 5 mg. sample (containing not less than 0.3 mg. of tocopherol) of the oil in 5 cc. of Absolute Ethyl Alcohol, adding 1 cc. of 65% nitric acid to the solution while shaking, and then boiling the mixture for three minutes.

After cooling the sample for at least 15 minutes, the color and extinction coefficient are determined with a Step photometer, the article explains.

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Isolates New Choline Derivatives By Adding Absolute Ether to EtOH

WASHINGTON, D. C.—First details of the process used to convert alpha-alkyl-beta-bromo-alkyl ethers into their corresponding beta-alkylated-choline-alkyl-ethers are disclosed in a patent just issued here.

No specific therapeutic claims are made for these salts, but it is known that related choline compounds are useful for treating certain cardiac irregularities.

For preparing beta-methyl choline-bromide-ethyl-ether, the patentees suggest heating alpha-methyl-beta-bromoethyl-ether with an equivalent amount of a 33% solution of trimethylamine in benzene for 12 hours at 100°C.

If this reaction product is dissolved in Absolute Ethyl Alcohol, the patentees claim, the solution can be decolorized with activated charcoal, which may be removed later by filtration.

The pure crystalline bromide may then be precipitated, the inventors explain, by evaporating the alcoholic filtrate to a small volume and adding Anhydrous Ether. Its melting point is given as 130-132°C.

Reports Viscera of Fish New Source of Vitamin A

PRINCE RUPERT, B. C.—A new source of Vitamin A has been discovered in the viscera of fish used in making fish liver oil according to the Dominion Fisheries Experimental Station here. All halibut and black cod viscera, heretofore considered waste, are now packed in cans, frozen, and sent to extraction companies in the East or treated at the local plant, a report before the Fisheries Research Board of Canada reveals.

Makes More Stable Shellac Dispersions

Colloidal dispersions of shellac in water may be prepared by the following procedure, according to a recent publication of the Indian Lac Research Institute:

(1) Dissolve 100 grams of shellac in 200 cc. of methyl acetone.
(2) Add, with vigorous shaking, 10 to 15 cc. of triethanolamine, and let stand for 24 hours.
(3) Add, with stirring, water to any required dilution (up to 3 or 4 liters).

Dispersions have good stability even under dilute conditions, it is said.

Here's Welcome News For All You Coffee Lovers!

STOCKHOLM, Sweden—All the original flavor and aroma of coffee can be conserved in one concentrated extract if you first "dearomatize" the coffee.

How it's done is explained in a recent Swedish patent. It involves treating finely-ground, roasted coffee with an air current, absorbing the aroma substances in paraffin oil, and then extracting the "dearomatized" coffee with petroleum ether to dissolve oils and flavor substances.

After this, Ethyl Alcohol is used to dissolve other flavor substances but not oils. Finally, the residual coffee freed from aroma, flavor substances and oils is extracted with water in the customary way. This extract combined with previous extracts furnishes the finished product.

New Alcohol Antiseptic Speeds Healing of Wounds

(*Continued from previous page*)

in front line posts, the article emphasizes.

Moreover, Major Perez-Vasquez adds, sterilization is not necessary, and "one does not have to worry about excess alkalinity or acidity."

Commenting upon the functions of the ingredients, Dr. Perez-Vasquez points out that ethyl alcohol acts as "an antiseptic, refrigerant and astringent." In his opinion, glycerin has an "osmotic effect which reverses lymph flow of the wound towards the lumen." He declares that "lymphangitis is very rarely observed."

Thymol, he adds, is useful in keeping down growth of yeasts and molds in wounds, while the analgesic properties of camphor and phenol are well known.

A curious fact not touched up by Major Perez-Vasquez is the similarity of the new antiseptic to Specially Denatured Alcohol formula 23-B formerly in use in this country. This had the following authorized composition:

To 100 gallons of ethyl alcohol add:
2 pounds of menthol crystals, U.S.P.
3 pounds of carbolic acid, U.S.P.

A close approach to it could also be made with 38-B, currently authorized for "Solvent in manufacturing antiseptic solutions N.F."

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

Six new wetting and detergent agents for soapless shampoos, bath preparations etc., are described as the salts of a homologous series of substituted aromatic sulfonic acids. The products give solutions of varying pH and turbidity but all have high detergent value in hard and soft water, lather well and leave no residue, the manufacturer claims. (**No. 200a**)

U S I

"All-weather" protection for polished brass, copper, and other metals is said to be provided by a new lacquer finding widespread use at the World's Fair. It is applied by brushing or spraying and leaves a transparent, hard, clear coating resistant to sunlight, moisture and metal expansion, according to the manufacturer. (**No. 201a**)

U S I

An improved mobilometer for determining the relative viscosity and plasticity of paints, oils, pastes, etc., has been introduced. The new model features a releasing and stopping mechanism which is said to insure greater accuracy. Vital parts are of monel metal and easily cleaned, the manufacturer states. (**No. 202a**)

U S I

An excellent caramel-like flavor with a pleasing strawberry background and none of the bitterness of burnt sugar is reported available here. Solubilities in alcohol are given as 3.5% in 120 proof and 2.3% in 190 proof although most flavoring extracts will require between 1 and 2% it is said. (**No. 203a**)

U S I

Sterilization of pipettes, syringes and hypodermic needles is easily accomplished with new glass cylindrical tubes designed to hold individual instruments plainly visible and ready for immediate use, according to an announcement. Three sizes which are easily cleaned and annealed to minimize breakage are available, the manufacturer states. (**No. 204a**)

U S I

Synthetic powdered civet eight times more concentrated and considerably cheaper than the natural product was announced recently. The new product is said to require no aging, and to be completely soluble in all essential oils, aromatic chemicals and alcohol. (**No. 205a**)

U S I

Gloves which resist acids, rubber solvents, crude oil, gasoline, caustic soda, etc., and have extra long cuffs with ridges to prevent liquids from running inside of gloves or onto arms, were announced recently. (**No. 206a**)

U S I

Labels for glass, metal and plastic containers can be given sharper and more permanent effects by means of a new "printing" process which applies heavier deposits of color, the developers claim. They also state that the paint can be fused to become an integral part of the glass. (**No. 207a**)

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Methanol

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Anhydrous
Absolute
C. P. 96%
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Completely Denatured
U. S. I. (Denatured Alcohol Anti-freeze)
*Super Pyro Anti-freeze
*Solox Proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

KETONES
Acetone, C.P.
Methyl Acetone

INTERMEDIATES
Acetoacetanilid
Acetoacet-o-chloranilid
Acetoacet-o-toluidid
Ethyl Acetoacetate
Para-chlor-o-nitraniline
Sodium Ethyl Oxalacetate

ESTERS, ACETATES
Acetic Ether
Amyl Acetate
Butyl Acetate
Ethyl Acetate
Isopropyl Acetate

ESTERS, PHTHALATES
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate
Dimethyl Phthalate

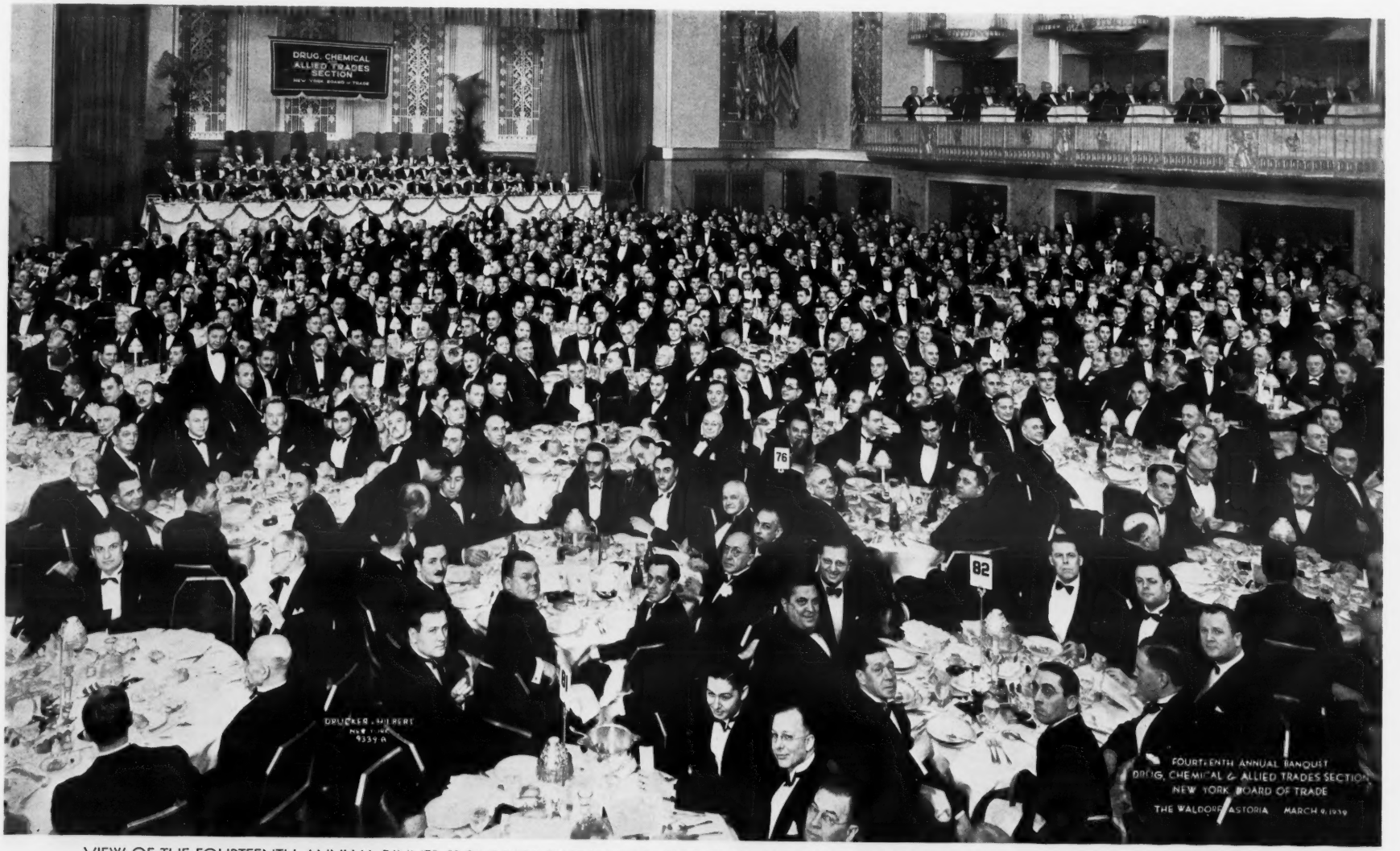
ESTERS, ETHYL
*Diatol
Diethyl Carbonate
Diethyl Maleate
Diethyl Oxalate
Ethyl Chlorocarbonate
Ethyl Formate
Ethyl Lactate

ESTERS, BUTYL
Butyl Propionate
Dibutyl Maleate
Dibutyl Oxalate

OTHER ESTERS
Amyl Propionate
Dimethyl Maleate

OTHER PRODUCTS
Collodions
*Curbay Binders
*Curbay X (Dried Curbay)
Ethylene
Nitrocellulose Solutions
Potash, Agricultural
Urethane

*Registered Trade Mark



VIEW OF THE FOURTEENTH ANNUAL DINNER SPONSORED BY THE DRUG, CHEMICAL, AND ALLIED TRADES SECTION OF THE NEW YORK BOARD OF TRADE, AND HELD MARCH 9 AT THE WALDORF-ASTORIA HOTEL, NEW YORK.

Exchange X BRAND

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CRYSTALS
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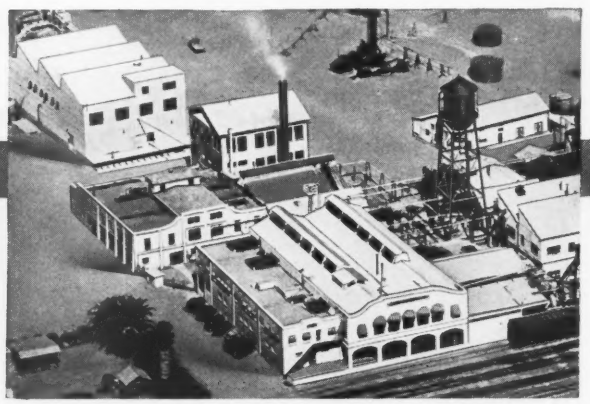

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Flavoring Extract Meeting

The thirtieth annual convention of the Flavoring Extract Manufacturers' Association of the United States will be held at the Hotel Pennsylvania, New York, June 5, 6 and 7.

In addition to the regular convention program there will be special discussions of the new federal and state food and drug laws and the labelling and packaging requirements.

In addition to the usual golf tournament the committee has arranged special trips to the World's Fair and June 6 has been designated as Flavoring Extract Day at the Fair. Dr. Clarke E. Davis, Virginia Dare Extract Co., Inc., Brooklyn, is the general chairman of the committee and W. F. Fischer, 16 Desbrosses st., New York, is the chairman of the hotel reservation committee.

McManus Reelected

V. P. McManus of H. W. Henning & Son, New York, has been re-elected president of the American Drug Import Agents Association and Fred L. Stallmen of Stallman & Co., has been elected vice-president. Ray Schlotterer is secretary-treasurer of the association.

The association which has not been active for some time was formed during the National Recovery Administration, and meetings will now be held again in order that the position of importers and importers agents under the new federal food, drug and cosmetic legislation may be discussed and clarified.

Christianson Joins N. A. R. D.

Theodore Christianson has been engaged as public relations counsel by the National Association of Retail Druggists. For the last few years he has been secretary and trade relations counsel for the National Association of Retail Grocers, a position which he resigned to accept the N. A. R. D. appointment.

Mr. Christianson was governor of Minnesota from 1925 to 1931 and later represented the state in Congress.

Chemical Exposition in Dec.

The seventeenth Exposition of Chemical Industries will be held at Grand Central Palace, New York, December 4 to 9.

Smith Heads Chicago Assn.

At the annual meeting of the Chicago Drug and Chemical Association held March 30 the following officers were elected for the year: president, Elmer F. Smith, American Aniline Products; vice-president, C. L. Drum, Owens-Illinois Glass Co.; secretary, Walter R. Nay, Mallinckrodt Chemical Works; treasurer, J. M. Gillet, Victor Chemical Works.

The following directors were elected to serve for a period of two years: George A. Wrisley, Allen B. Wrisley Co.; W. F. Bahe, Parke Davis and Co., H. F. Woulfe, Pepsodent Co., Ralph C. Jennings, New York Quinine and Chemical Works.

Toilet Goods Assn. Convention

The annual convention of the Toilet Goods' Association will be held May 22, 23 and 24 at the Hotel Biltmore, New York. An interesting program is being arranged by Charles S. Welch, executive secretary of the Toilet Goods' Association, and H. Gregory Thomas, chairman of the Board of Standards. In respect to the memory of the late Charles S. Kelly, no successor as chairman of the entertainment committee has been appointed this year. Le Roy Root is vice chairman and other members of the committee include: Karl Voss, W. E. Klaas, W. P. Murray, M. Lemmermeyer, Charles Fishbeck, W. D. Barry, and A. C. Burgund. The entertainment program will as usual, include a theatre party and supper on Monday, May 22, ladies' bridge at the Biltmore Hotel, and golf for the men on Tuesday, May 23, and a banquet at the Biltmore on Wednesday evening.

L. R. ROOT

Labeling Pharmaceuticals

The Pharmaceutical Advertising Directors Club held a Labeling Clinic to discuss labeling problems under the Food, Drug, and Cosmetic Act at the Waldorf-Astoria Hotel, New York, April 3. Charles Wesley Dunn, Counsel for the American Pharmaceutical Manufacturers' Association, and Dr. Charles Vanderkleed, Chairman of the Research Committee of the same association, spoke on the labeling provisions of the act as applied to drugs and pharmaceuticals during the morning session. During the afternoon session, these two men answered questions.

People

Lilly Award to Wald

At the opening session of the annual meeting of the American Chemical Society, held in Baltimore, on April 3, the Eli Lilly Co. award was presented to Dr. George Wald, instructor in biology at Harvard University. The award of $1,000 has been granted to him in recognition of his fundamental work in the field of biological chemistry, and particularly for his researches on the relation of vitamin A to the human eye.

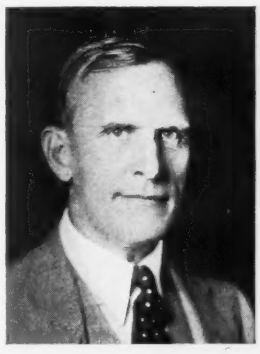
Teeter Joins Chamber

At the monthly meeting of the Chamber of Commerce of the State of New York held April 6 Albert A. Teeter, treasurer of Chas. Pfizer & Co., New York, was among the candidates elected to membership.

Snyder in Private Practice

M. C. Eaton, general manager of the Norwich Pharmacal Co., has announced the resignation of Dr. John Paul Snyder as chief chemist of the company. Dr. Snyder will engage in private practice in Washington, D. C., as a technical advisor in the pharmaceutical field, in fulfillment of a desire which he has held for some time.

He has been in the employ of Norwich for twenty-eight years, coming to it in the summer of 1911 upon completion of a post-graduate course at the Medical Chirurgical College at Philadelphia where he specialized in pharmaceutical work. His undergraduate work was done at Lafayette College.

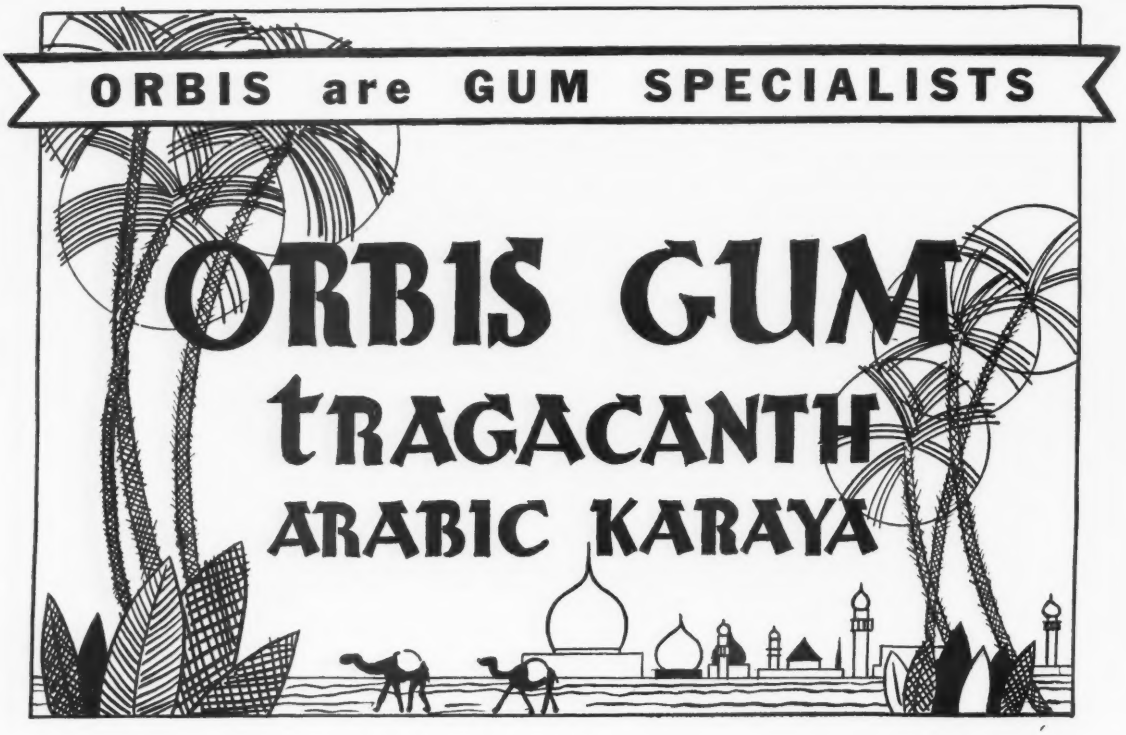


DR. JOHN PAUL SNYDER

Dr. Snyder has been very active in the numerous national pharmaceutical associations, having served as chairman of the scientific section of both the American Pharmaceutical Association and the American Drug Manufacturers' Association and for many years has been chairman of the contact committee of the latter group, which he also represents in scientific and legal matters. He is the author of many articles on pharmaceutical subjects.

When he first went to Norwich he was in the analytical laboratory and in 1916 was made chief chemist of the company. For the past several years his duties have brought him in close contact with the various changes in the industry resulting from new laws and regulations and his services for the company in Washington have brought him many associations which should be helpful to him in his new work.

Dr. Snyder is not completely severing his relations with Norwich for the company



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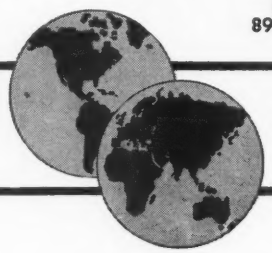


is to be his first client. The company will avail itself of his services as a consultant and he will continue to represent it in Washington.

McDaniel & Cassell Named V. P.'s

E. D. McDaniel and W. R. Cassell have been elected vice-presidents of White Laboratories, Inc., Newark.

E. D. McDANIEL

Mr. McDaniel has been appointed vice-president in charge of sales of professional and consumer products. He has been sales manager of the company since 1935.

W. R. CASSELL

Mr. Cassell was appointed vice-president in charge of sales to special markets. He has been sales manager of vitamin sales in bulk to various industries since 1930.

B. T. Bush in Own Business

Burton T. Bush, who for the past year and a half has been vice-president in charge of production and importation at Albert Verley, Inc., Chicago, has organized his own business, Bush Aromatics, Inc., 136 Liberty st., New York.

Before going to Verley, Mr. Bush was for several years manager of the Aromatics Division of Naugatuck Chemical.

Neumann with Chevalier Garde

Dietrich H. Neumann has been appointed business manager for Parfums Chevalier Garde, Inc., New York. He has had varied and extensive experience in Central America, abroad, and in this country, particularly specializing in methods of distribution and sales.

Seen at lunch at the recent Druggists' Supply Corp. meeting were the above, rotating from left to right: Perley Hayes, Earl Means, Percy C. Magnus, James M. Penland, Charles O'Malley, Turner Currens, Harold Hutchins.

Lee Williamson in Florida

R. E. Lee Williamson, secretary of the Federal Wholesale Druggists' Association, is spending three months in Florida where he hopes to recover completely from his recent illness.

Young Miss Schellhammer

Mr. and Mrs. Gorman Schellhammer are receiving congratulations on the birth of a 6½ pound daughter on March 9th at the Methodist Episcopal Hospital in Brooklyn. Mr. Schellhammer is the plant superintendent of the Ertel Engineering Corp., New York.

Furst Heads Company

C. W. Furst, treasurer of Furst-McNess Co., Freeport, Ill., has been elected president of the company and will now serve as president and treasurer. He succeeds H. A. Hillmer who has resigned as president to become chairman of the board of directors. Arthur Rasmussen and A. B. Mattert have been re-elected vice-president and secretary respectively.

To Visit New York

William Neate and Alfred Neate, Jr., of Calmon & Neate Ltd., London, will arrive in New York the end of April. They control the Calmon & Neate organization in London, British distributor for Revlon, as well as other American cosmetics. Their headquarters will be at the Chemists' Club, New York.

Harang Back At Work

Pierre Harang, general sales manager of the Houbigant Sales Corp., New York, resumed his duties late in March, after undergoing an appendectomy.

Solo Returns from Trip

L. A. Solo, head of the Solo Laboratories, Chicago, private label manufacturer, has returned from a West Indies trip. Although Mr. Solo made his headquarters in Puerto Rico, he made short trips to Cuba, the Dominican Republic, St. Thomas and other points of interest and brought back to Chicago some interesting stories about the golf courses on the various islands.

Glossinger-Vadsco President

John Glossinger, vice-president of Vadsco Sales Corp., has been elected president of the company, succeeding Samuel L. Antonow, who has resigned. Mr. Antonow has been elected chairman of the board.

Fabron & Hardy Win Award

F. Fabron and L. Hardy, perfumers with Bruno Court, Grasse, France, were winners of two of the four prizes awarded in the 1938 "Jasmin Competition" sponsored by "Soap, Perfumery & Cosmetics" of London, England. The competition called for an odor suitable for a perfume imitating as faithfully as possible the true jasmin flower odor.

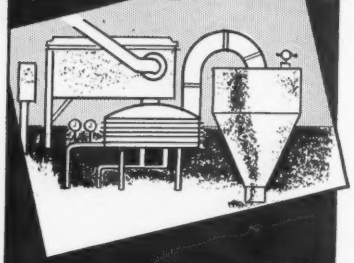
Mr. Fabron submitted "Jasmin L" and Mr. Hardy submitted "Jasmin Extrait." The judges were F. V. Wells, F. C. S., editor of "Soap, Perfumery & Cosmetics," W. A. Poucher and Frank H. Sedgwick.

Naugatuck Aromatics, New York, represents Bruno Court in the United States.

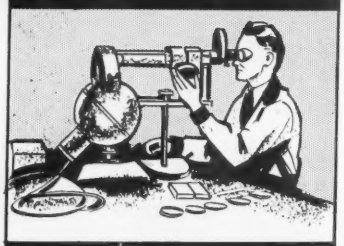
Perry on Com. Solvents Board

Henry E. Perry, vice-president in charge of operations for Commercial Solvents Corp., New York, has been elected a member of the board of directors at the annual meeting which was held in Baltimore, March 16. Mr. Perry, who has been associated with the company since 1922, succeeds William S. Gray, president of William S. Gray & Co., on the board.

NOW



Kolmar High Air Pressure Process produces the uniform small particle size for which Soft-As-Silk Powder is known.



The Photometer scientifically records and maintains absolutely uniform and correct shades of all make-up products.

Make these tests to prove our statements of Kolmar superiority: Apply Soft-As-Silk powder and any other brand to opposite sides of the same face. Note which brand applies most smoothly and adheres longest. Examine Soft-As-Silk Powder under a microscope to see uniform color disbursement. The bite test will disclose freedom from grit.

You can get it! The Finest Face Powder Produced

PERFECTED SINCE 1929 but only recently manufactured in quantity.

TEN YEARS AGO Kolmar developed a unique high air pressure process for powder (and rouge) which produced uniform particle size, fine satiny texture and perfect color distribution.

UNTIL RECENTLY, because of constantly increasing demands for other Kolmar products, we have been able to accept only very limited orders for Kolmar Soft-As-Silk Powder.

BUT TODAY YOU CAN GET IT: in any color, in any quantity, in bulk, in your own boxes, or completely packaged in boxes supplied by us.

WE KNOW that Kolmar Soft-As-Silk Powder builds repeat business by its smooth application, naturalness, imperviousness to water or perspiration, superior smoothness, adherence, lasting qualities, and absolute purity. Kolmar Soft-As-Silk Powder is made of the finest available materials, regardless of cost.

WRITE FOR SAMPLES TODAY

Manufacturers of cosmetics for private label brands only. We never compete with our clients. We also protect the interests of our clients with Products Liability Insurance.

Kolmar laboratories

MILWAUKEE • HOBOKEN

Kolmar representatives

M. C. Boyd . . . . . 100-108 River St., Hoboken, N. J.
Norman Kole . . 11-108 Merchandise Mart, Chicago, Ill.
Warren Curry . . . . . 3950 Club Drive, Atlanta, Ga.
R. G. F. Byington . . 155 N. Vermont Ave., Los Angeles, Cal.

Companies

Manning With Ciro

Frank Manning, formerly with Lucien Lelong, Inc., will now represent Parfums Ciro, Inc., New York, in the mid-west territory.

Hergelroth Joins Luft

Harry M. Hergelroth, formerly a marketing and advertising consultant with McKesson & Robbins, has become sales manager of George W. Luft Co., Long Island City.

Welles-Dow Adv. Mgr.

George D. Welles, Jr., has been appointed advertising manager of the Dow Chemical Co., Midland, Mich. In this position he succeeds W. F. Stumpfig who has been assigned to the sales department with headquarters at the Midland office.

Mr. Welles has been associated with Dow since June 1937 when he became editor of the "Dow Diamond," bimonthly company magazine, and of "Spot News," a monthly publication prepared by Dow for circulation to the dry cleaning industry. Prior to that time he was a staff columnist on the "Toledo News-Bee" and, before that, was with the publicity department of Sun Advertising Co., Toledo. He is a graduate of Hotchkiss School, Williams College and the University of Michigan Law School.

Fritzsche Opens Branches

In order to serve its customers better in the Cincinnati and Cleveland territories, Fritzsche Brothers has opened branch offices at 2306 Carew Tower, 5th and Vine sts., Cincinnati, and at 1406 Standard Building, 1370 Ontario st., Cleveland. James R. Eller will manage the Cincinnati office while James F. Shumaker will be in charge in Cleveland. Both Mr. Eller and Mr. Shumaker were formerly attached to the Columbus office. The latter office will continue as in the past under the direct supervision of George L. Ringel, vice-president in charge of Eastern sales. It is not the present intention of the company to carry stocks in the new offices.

Merrell Honored by City

The Cincinnati Chamber of Commerce, at a banquet held March 23 in celebration of its 100th anniversary, presented bronze plaques to Cincinnati concerns who have been in business 100 years or more.

Among the firms so honored was the Wm. S. Merrell Co., which was founded by Dr. Wm. Stanley Merrell in 1828 and has continued under management of the Merrell family. The present heads of the company are two grandsons of the founder, Charles G. Merrell, chairman of the board, and Thurston Merrell, president.

Epinephrine in Oil

Epinephrine in Oil, as developed by Dr. Edmund L. Keeney of Johns Hopkins Medical School and Hospital has been placed on the market by E. R. Squibb & Sons. This preparation is a suspension of powdered epinephrine crystals in peanut oil, in the proportion of 2 mg. in each 1 cc., resulting in a dosage form of epinephrine that has a more prolonged effect than the usual aqueous solution of epinephrine hydrochloride. The purpose of using oil as a vehicle in this new preparation is slow absorption. In fact the preparation has been frequently discussed and described as "Slow Epinephrine."

Epinephrine in Oil is indicated in alleviating the acute paroxysms of asthma; chronic bronchial asthma; urticaria, and angioneurotic edema. It is given preferably by intramuscular injection and Dr. Keeney has found a single dose sufficient to keep patients free from uncomfortable asthmatic symptoms for periods of from 8 to 16 hours.

First Machinery Moving

About May 1 the First Machinery Corp., New York, will consolidate its warehouses, plant, offices and showrooms under one roof. The company's new address will be 9th St. and East River Drive, New York.

Com. Solvents to Move

Commercial Solvents Corp. will move its New York office to 17 East 42 st., that city, on April 22.

Weil Joins Chanel

Richard Weil is now covering the southern territory for Chanel, Inc., New York, which was formerly covered by Charles Crandall. Mr. Crandall will now devote all of his time to the territory west of Denver.

Clow Advanced by Calco

Allan B. Clow, who has been manager of the household products division of Calco Chemical Co., Bound Brook, N. J., for the past six years, has been made advertising manager of the company. In this position, he succeeds E. T. Nettleton who has now become associated with the Charles W. Hoyt Co., advertising agency for the Calco Chemical Co.

Parsons to Larger Quarters

M. W. Parsons Imports and Plymouth Organic Laboratories, Inc., will move the first of May to much larger quarters at 59 Beekman st., New York. This will enable the company to carry larger stocks of its regular line of merchandise and so give better service to its customers. The shipping and receiving will be from 89 Ann St., New York.

Lorscheider-Schang Expands

Lorscheider-Schang Co., has announced the installation of enlarged facilities for the manufacture of machine-made boxes in its daylight factory in Rochester, N. Y.

In addition to the manufacture of machine-made boxes, the company will continue to produce hand-made boxes and displays. Frank Higgins is representing the company in the metropolitan district while G. Robert Bartold continues to travel in the eastern and middle western districts. George S. Bartold is in charge of the production.

Frederick Schang is president of the company which was founded in 1903; George S. Bartold is vice-president and C. V. Loder is secretary and treasurer.

FACTORY OF LORSCHEIDER-SCHANG

B. & B. Appoints DeBeer

George L. De Beer has been appointed advertising manager of Bauer & Black, Chicago, filling a vacancy which has existed since the resignation last May of Arthur E. Tatham.

For the past five years Mr. De Beer has been a member of the advertising department of Swift & Co., in charge of the advertising of associated companies and Swift Canadian Co., Ltd. He is also a member of the advertising staff of Northwestern University's School of Commerce.

Abbott Re-elects

At the annual meeting of stockholders of Abbott Laboratories, North Chicago, Ill., the entire board of directors was re-elected for another year. Those returned to the board were: E. H. Ravenscroft; S. DeWitt Clough; Rolly M. Cain; James F. Stiles, Jr.; Dr. E. H. Volwiler; Alfred W. Bays; Dr. J. F. Biehn; Edgar B. Carter; Edmund L. Drach; Raymond E. Horn; Carl Nielsen; Dr. George W. Raiziss; Floyd K. Thayer; Claud A. Thornburg and Ferdinand H. Young.

The board of directors, at their meeting on the same day, retained the following officers: Edward H. Ravenscroft, chairman of the board; S. DeWitt Clough, president and general manager; Rolly M. Cain, executive vice-president and assistant general manager; James F. Stiles, Jr., vice-president and treasurer; Dr. Ernest H. Volwiler, vice-president in charge of research; Raymond E. Horn, vice-president and general sales manager; Alfred W. Bays, secretary and general counsel and adolph Wolff, assistant treasurer.

Research Consultants

Dr. L. J. Camuti and A. A. Reitwiesner have organized Research Consultants, Inc., and have opened offices in the Chrysler Building, New York.

Both Dr. Camuti and Mr. Reitwiesner were formerly connected with the Bureau of Food and Drugs, Department of Health, New York City, and more recently with Copeland Service, Inc., which was founded by the late Senator Royal S. Copeland, the sponsor of the Federal Food, Drug and Cosmetic Act.

Johnstone, Inc., Perfumes

A new organization to be known as, "Johnstone, Inc., Creator and Manufacturer of Rare Perfumes," has been formed for the manufacture of perfumes, toilet waters, and cosmetics. Fitzhugh R. Johnstone, formerly president of Perfumes, Inc., is the president, general manager and perfumer of the new concern which will have offices, laboratory and plant in Philadelphia. Display rooms and divisional sales offices will be located in New York, Chicago and San Francisco.

Anchor Moves Adv. Dept.

The advertising department of Anchor Cap & Closure Corp., Long Island City, has been moved to the general headquarters office of Anchor Hocking Glass Corp., Lancaster, O.

Degener Advanced by Heyden

Fritz A. Degener has been made manager of the Chicago sales office of Heyden Chemical Corp. Mr. Degener has been associated with Heyden Chemical Corp. for a great many years, first as a member of the sales staff in New York, and for the past several years as a member of the Chicago sales staff.

FRITZ A. DEGENER

As manager of the Chicago branch he succeeds H. C. Ellis, who has retired after more than thirty-six years spent as Heyden's Chicago representative.

Dreyer House Organ

Dreyer-Log is the name of a new house organ which is being issued each month by P. R. Dreyer, Inc., New York. In the issue for March Charles Fischbeck writes on "Markets and Views as I See Them." George H. Zirkel writes on "fixing" perfumes. There is news of the new California branch and a "Question Corner."

Lueders Price List

George Lueders & Co., New York, has issued a new price list of its blended perfume oils, specialties and bases. The booklet is very conveniently arranged and the company's products are grouped according to the preparations for which they are particularly suited. An ingenious method of describing the odors has been worked out so that by consulting a table of key letters it is possible to tell at a glance how the odor may be used as a blender.

Another innovation is the inclusion in the catalogue of several return post cards which can be detached, filled in and mailed without postage to George Lueders & Co. when information about any product is wanted. Copies of the booklet are available upon request.

Brown Heads Rolls Razor

R. G. Brown has been elected president and general manager of Rolls Razor, Inc., New York, succeeding Edwin H. Schiffer who has resigned. Mr. Brown was formerly general sales manager of Ingersoll-Waterbury Co.

Standard Synthetics Expands

Standard Synthetics, Inc., New York, has announced that, in addition to the branch office at 908 Central st., Kansas City, Mo., under the management of Robert Stoerger, a branch has been opened at 1514 No. Front st., Philadelphia. This new Philadelphia office will be under the management of Frank E. Wilson.

Glyco Chemical Book

A new edition of "Chemicals by Glyco" has just been published by Glyco Products Co., Inc., New York. The seventy-two page book is intended really, less as a catalogue than as a "suggestion" book for chemists, technical workers and manufacturers in many different industries. While suggested uses are given for each product and formulae are suggested, it is pointed out that the chemicals are readily adaptable to many uses and many industries. Copies of the catalogue are available upon request.

Pinaud Denied Injunction

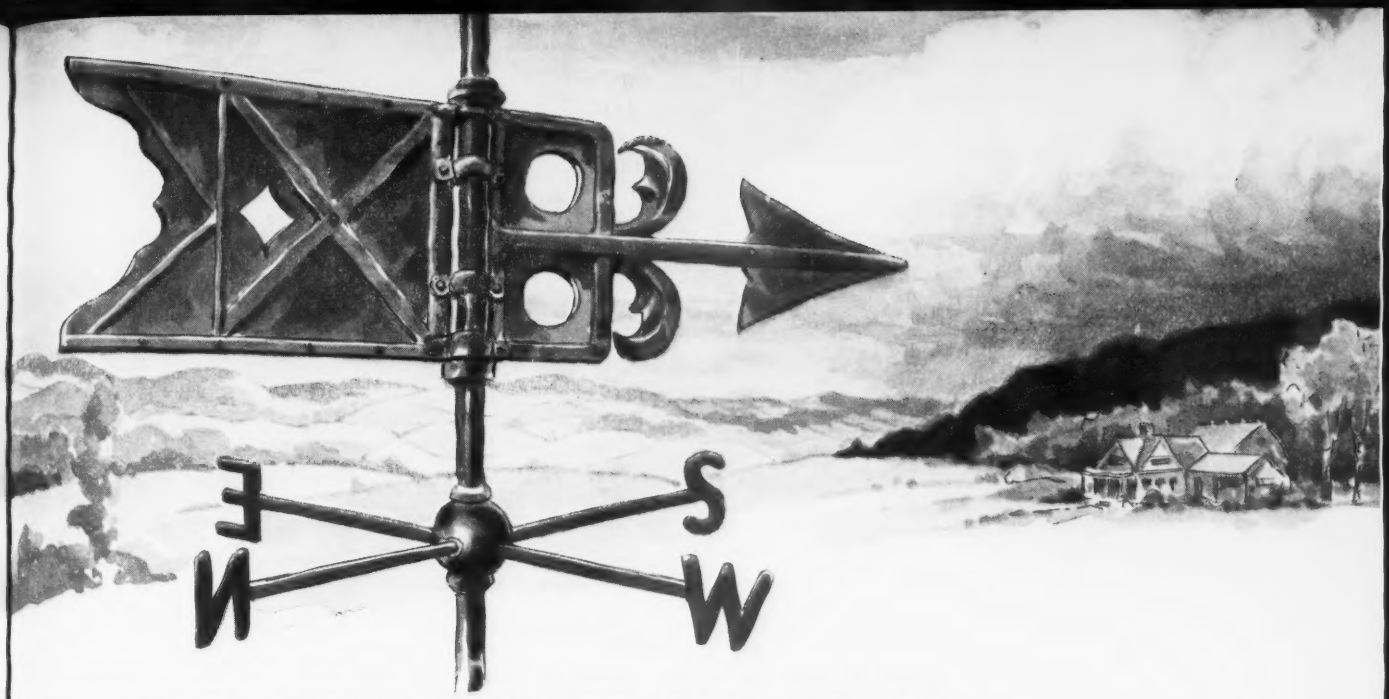
Pinaud, Inc., has been denied an injunction to restrain Beaux Arts Chemists Corp., New York, from breaking up a combination package and selling the parts separately at higher prices.

Pinaud claimed that since 1936 it has combined packages of Eau de Quinine with Pinaud shampoo, and Lilac Vegital toilet water with Lilac Vegital talcum powder, with each combination selling for the price of one item. It charged that Beaux Arts Chemists Corp., separated the combinations, erased the statement of the special offer and sold the items individually at a higher price.

The court ruled that an injunction could be granted only if the purchaser could learn from printed matter on the package that two items were being offered for the price of one. Since the statement had been erased, the court held that there was no unfair competition.

Hopcroft Elected President

Donald L. Hopcraft has been elected president of the Lyndon Products Corp., Norwalk, Conn., manufacturer and distributor of cosmetics and "Suav-air" perfume specialties. He is also conducting the business of the D. L. Hopcraft Co. at 565 Fifth Avenue, New York, as merchandising consultant and sole United States sales representative for "Vibrosan —the modern electric massage vibrator."



THROUGH MANY STORMS...

THE EXECUTIVE who successfully steers his business through economic storms and periods of business inflation is the executive whose first consideration is always for the quality of his product. He knows that unfailing quality will hold a host of customers, regardless of business conditions. And, conversely, even when business is good, he tempts fate when he trifles with quality.

To this type of executive the J. T. Baker Chemical Co. has dedicated its manufacture of Fine Chemicals. Baker's inflexible principle, "There can be no compromise with quality", is constantly reflected in the purity of Baker products.

Skilled in the art of manufacturing precision chemicals—control methods, regardless of cost, are more important than the urge to roll up tonnage. Each Baker Fine Chemical must meet predetermined and exacting standards.

Pharmaceutical manufacturers who are vitally interested in the quality of their finished products appreciate this care. They are buying more and more of their Fine Chemicals from Baker. They have come to realize that quality selling requires strict quality buying of raws.

The repeat business on the books of the J. T. Baker Chemical Co. testifies to the satisfaction that Baker Fine Chemicals give. Arrange with the Baker salesman for test samples of Baker products. See Baker quality for yourself.

J. T. BAKER CHEMICAL CO., Phillipsburg, New Jersey

NEW YORK
420 Lexington Avenue

PHILADELPHIA
220 South 16th Street

CHICAGO
435 North Michigan Avenue

ANALYZED REAGENTS
Baker's
FINE CHEMICALS

A partial list of Tonnage Fine Chemicals held under rigid control, at no price premium.

- Alkali Bromides
- Potassium Iodide
- Magnesium Oxide
- Cream of Tartar
- Bismuth Subcarbonate—Subnitrate and other Salts
- Caustic Potash and Soda Sticks and Pellets
- Rochelle Salt
- Lead Acetate
- Salicylates

Baker's fine chemicals

for Pharmaceutical Manufacturers

BRAZILIAN, EUMALON and MUGOL S

One of the best selling adjuncts to any product is the perfume incorporated therein.

The usual odors in only slightly varied phases have been used over and over again.

The drastically new in perfumery is rarely found. When a new note is discovered, it is of inestimable commercial value in that it attracts the jaded taste of the blase buyer and creates a sale immediately.

The above products come under the heading of ***new notes in perfumery***.

They are base products destined to be combined by the perfumer in new and attractive fragrances which ***will put dollars into the pockets*** of the cosmeticians who use them.

Samples upon request.

Agfa

AROMATICS DIVISION
GENERAL DRUG COMPANY

170 Varick Street, New York - Transportation Bldg., Los Angeles, Cal.
9 S. Clinton St., Chicago, Illinois - 907 Elliott St., West., Windsor, Ont.

WHEN YOU BUILD

YOUR PRODUCTS

REMEMBER THE KEYSTONE IS

QUALITY

With the feeling that there can be no better evidence of the service we aim to render to our patrons, we enumerate below the outstanding firms we represent. These 8 JEWELS support our keystone of quality service.

Come to headquarters for the *finest* RAW MATERIALS FROM ALL OVER THE WORLD. As direct importers our service offers exceptional advantages to buyers in Quality, Service, Spot Stocks . . . Natural Floral Products, Oil Lavender Fleurs, Oil Ylang, Oil Citronella Java, Zinc Oxide, Gum Benzoin Siam, Gum Tragacanth Persian, Gum Karaya, Bleached Ozokerite, Sun-bleached Beeswax, Rice and Starch, Kaolin, Precipitated Chalk.

THE ATLANTIC REFINING CO.

PHILADELPHIA, PA.
260 SOUTH BROAD STREET

Petroleum Products
White Mineral Oils U.S.P. for pharmaceutical use.
Technical for cosmetic uses.
All gravities, all viscosities.

THE HARKNESS & COWING CO.

CINCINNATI, OHIO, U.S.A.

Manufacturers of Stearic Acid
Saponification Process

H. J. BAKER & BRO.

NEW YORK

Sturge's English precipitated chalk U.S.P.

Extra Light Dense

THEODOR LEONHARD WAX CO.

Established 1852
HALEDON • PATERSON, N. J.

Bleachers and Refiners of Bees-Wax
White Bleached Bees-Wax T. L. Brand
Extra Quality—U.S.P. and 100% pure

SIERRA TALC CO.

LOS ANGELES, CALIF.

Sierra Talcs approximate the ideal — chemically and physically—and excel in uniformity of milling and color

LACO PRODUCTS CO., INC.

BOSTON • NEW YORK

Manufacturers and Importers
Castile Soap "Laco"
Powdered — Granular — Bars

THURSTON & BRAIDICH

NEW YORK

Specialties:
Gum Arabic—Gum Karaya—
Gum Tragacanth
Vanilla Beans Tonka Beans

COLGATE-PALMOLIVE-PEET CO.

JERSEY CITY, N. J.
Executive Offices—105 Hudson Street

Glycerine
Chemically Pure U.S.P. Dynamite

A. C. DRURY & CO. INC.

219 E. NORTH WATER ST., CHICAGO, ILLINOIS

Medicinals
of Monsanto Quality

The effectiveness of Monsanto Medicinals has been proved through many years of satisfactory performance. Manufacturers look to Monsanto with confidence to supply their medicinal requirements.

Acetanilid U. S. P.

Acetophenetidin U. S. P.

Ammonium Benzoate U. S. P.

Aspir Gran

Aspirin (Acetyl Salicylic Acid U. S. P.)

Aspirin Starch Granulations
10%, 16% and 20%
Also pink and green 10%

Caffeine U. S. P.

Chloral Hydrate U. S. P.

Chloramine-T U. S. P.

Glycerophosphates

Phenol U. S. P. (Carbolic Acid)

Phenolphthalein U. S. P.

Phosphates

Salicylic Acid U. S. P.

Sodium Salicylate U. S. P.

Monsanto Chemical Company
St. Louis, U. S. A.

New York • Chicago • Boston • Birmingham • Detroit
Charlotte • Los Angeles • San Francisco • Montreal • London

Mr. Hopcraft was formerly sales manager of Delv, Ltd., and for the past seven years has been associated with that company, Primrose House, Bost Toothpaste and other Wasey products.

"Toilet Requisites" Awards

To encourage the maintenance of a high standard of merchandising practices in the perfume and cosmetic industry, TOILET REQUISITES, the retail magazine of that industry, has announced the creation of four annual awards to be presented each year to those manufacturers who have sponsored the best package, the best promotion, the best advertising and the best merchandising policy during the year. The following buyers and merchandise managers will act as judges in determining the winners of the awards for 1939: A. C. Crowley, Hale Bros. Stores, Inc., San Francisco; R. E. Curran, Kresge Department Store, Newark, N. J.; Carl B. Drake, Younker Brothers, Inc., Des Moines; J. A. Egan, Stix, Baer & Fuller Co., St. Louis; D. Fischman, Saks Fifth Ave., New York; John S. Holliday, Joseph Horne Co., Pittsburgh; John R. Nazzaro, Wm. Filene's Sons Co., Boston; and Fred West, Emery, Bird, Thayer, Kansas City.

A supplementary committee of three, without votes or other voice in determining the winners of these awards, will serve in purely advisory capacity as consultants on any questions which may arise in connection with the governmental regulations affecting the packaging, advertising and selling of perfumes and cosmetics. The members of this non-voting committee are: Elmer Sheets, editor, Toilet Requisites; H. Gregory Thomas, chairman, board of standards, Toilet Goods Association; and C. S. Welch, executive secretary, Toilet Goods Association.

Financial

Coty Reorganizes

At a special stockholders meeting held April 6 a plan for dividing Coty, Inc., New York, into two corporations was voted upon.

It was proposed to transfer all foreign assets to a new corporation to be known as the Coty International Corporation and the remaining domestic assets to a new corporation to be known as Coty, Inc. Each shareholder is to receive one share in each company in exchange for each share now held.

Coty, Inc., was formed in 1922 and in 1929 bought shares of Coty, S. A., the French company, through which the United States company controls Coty companies in Argentina, Brazil, Italy, Mexico, Rumania and England.

The boards of directors of the new companies will be identical, except that Reymond Greilsamer of the French company will be a member of the Coty International

H. L. BROOKS

board. The other directors are: H. L. Brooks, Yvonne Cotnareanu, Leon Cotnareanu, Rolant Coty, Paul Fuller, Jr., Louis A. Keidel, B. E. Levy, Grover A. Whalen and Robert M. Youngs.

The proposed new United States company will have total assets of $4,572,923 as of Dec. 31, 1938, including $1,244,144 cash, $1,494,598 receivables, $995,002 inventories, and $626,772 investments at market. Current liabilities are $528,047.

The assets to be taken over by the proposed International company were $3,-103,000 on Dec. 31 of which about $,1500.-00 was allocated to England, $1,000,000 to France and $603,000 to other countries.

Earnings of the present Coty, Inc. were $636,402 in 1938 as compared with $516,077 in 1937. Sales totalled $6,637,257.

Abbott Dividends

At a meeting of the stockholders of Abbott Laboratories, North Chicago, Ill., held February 16, an extra dividend of 10 cents was declared in addition to the regular quarterly dividend of 40 cents on common stock, both payable March 31, to stockholders of record March 14. At the same time, the regular quarterly payment of $1.12½ a share on the $100-par 4½ per cent. cumulative preferred stock was authorized. The latter is payable April 15.

Amer. Cyanamid Earns Less

American Cyanamid Co. reports for the year 1938 net income of $2,452,912, equivalent to 91 cents each on the combined 2,618,359 shares of $10-par Class A and Class B common stocks, excluding 59,674 shares of Class B held in the treasury. This compares with a net income of $5,-268,255, or $2.09 a share on the 2,520,368 shares of combined Class A and B common stocks outstanding last year.

Anchor-Hocking Earnings

Anchor Hocking Glass Corp. and subsidiaries report for 1938 net profit of $752,-400, equal to 68 cents each on 715,550 shares of no-par common stock and comparing with $1,151,781, or $1.24 a share on 715,550 common shares in 1937.

J. T. Baker Earnings

J. T. Baker Chemical Company reports for 1938: Net profit, $53,907, equal to 15 cents each on 109,707 shares of common stock, compared with net profit of $158,-380, or $1.10 a share, in 1937.

Chesbrough Earnings Off

Chesbrough Manufacturing Co., reports for 1938 net profit of $638,514, equal to $5.32 each on 120,000 shares of $25-par capital stock and comparing with $807,-335, or $6.37 a share in 1937.

Colgate Earnings High

Colgate-Palmolive-Peet Co. reports for 1938 a net profit of $4,921,921, equivalent to $1.77 a share on common stock and comparing with $782,250 earned in 1937. Earnings this year were the highest the company has had since 1931.

The company's total domestic and foreign net sales for 1938 amounted to $99,452,741, as compared with $99,991,355 in 1937. The sales and profits of the domestic toilet article department were the highest since 1929 and the net profit of the foreign subsidiaries amounted to $2,038,562.

Hazel-Atlas Earnings

Hazel-Atlas Glass Co. and subsidiaries report for 1938 net profit of $2,157,962, or $4.97 each on 434,409 shares of capital stock, and comparing with $2,897,506, or $6.67 a share earned in 1937.

Heyden Earnings Down

Heyden Chemical Corp. and subsidiaries report for 1938 net profit of $331,458, or $2.07 a share on 149,643 common shares. This compares with a net profit of $612,324, or $3.94 a share, earned in 1937.

Katz Drug Earns More

Katz Drug Co. and subsidiaries report for 1938 net profit of $201,369, or 45 cents each on 396,000 shares of $1-par common stock and comparing with a profit of $178,-184, or 20 cents a common share in 1937.

Lehn & Fink Earns Less

Lehn & Fink Products Corp. reports for 1938 net profit of $420,414, equal to $1.05 each on 400,000 capital shares. This compares with $532,623 earned in 1937.

Merck Earnings Down

Merck & Co., Inc. and subsidiaries report for 1938 a consolidated net income of $579,356, equal to $1 a common share. The net income in 1937 was $1,095,248, or $2.72 a share on 300,000 common shares. Inventories were reduced almost $600,000 to $4,415,986, making it possible to reduce borrowings from $500,000 on Dec. 31, 1937 to $200,000 at the end of 1938.

Peoples Drug Earns Less

Peoples Drug Stores, Inc. and subsidiaries report for the year 1938 a net profit

NEW POWDERED WAVE SET *INSTANTLY* SOLUBLE IN WATER

KWIK-GUM IN ECONOMICAL POWDER FORM READY FOR USE

The L & K Laboratories have recently developed KWIK-GUM, a revolutionary type of wave set powder which is instantly soluble in water! KWIK-GUM is new! *Do not compare it with the ordinary type of wave set powder* that has been on the market for years. KWIK-GUM is a scientifically processed product.

KWIK-GUM may be poured into water in an open container and gently stirred with a spoon and in thirty seconds forms a heavy, uniform and non-lumpy waving lotion that may be used *immediately.*

KWIK-GUM comes to you as a finished product, ready for use. It is all powder . . . no bulky liquids are needed to aid solubility.

Why not investigate the possibilities of KWIK-GUM *right now?* Use the coupon below for sample and price quotations.

L & K Laboratories, 720 S. 4th St., Minneapolis, Minn.

L & K Laboratories, 720 S. 4th St., Minneapolis, Minn.

Gentlemen:

Please send me a sample package of KWIK-GUM and price quotations.

Company Name.....

Address.....

City.....State.....

By..... DC4

America's "No. 1" OIL OF ORANGE

Compare this orange oil with any high grade oil and you will know why Exchange *Cold Pressed* Oil of Orange, U.S.P. is in such great demand. Ask our jobbers for sample and compare quality and price.

Exchange X BRAND

COLD PRESSED, U.S.P.

Sold to the American market exclusively through:

DODGE & OLCOTT COMPANY
180 VARICK STREET, NEW YORK CITY

•

FRITZSCHE BROTHERS, INC.
76 NINTH AVENUE, NEW YORK CITY

Distributors for: California Fruit Growers Exchange, Products Department, Ontario, California
Producing Plant: The Exchange Orange Products Company, Ontario, California

Copr. 1939, Products Dept., California Fruit Growers Exchange

of $858,606, equal to $3.27 each on 245,474 shares of common stock. This compares with an income of $1,059,602, or $4.07 a share, in 1937.

The net sales totaled $21,734,863 against $22,383,144 in 1937.

Plough Earnings Off

Plough, Inc., and subsidiaries report a net profit of $201,287 for 1938, equivalent to 67 cents a share on 300,000 shares and comparing with $304,033, or $1.01 a share, in 1937.

Obituaries

George P. Braun, Jr.

George P. Braun, Jr., vice-president and advertising manager of the Murine Co., Chicago, died March 25 after an illness of about three weeks. He was twenty-seven years old. Mr. Braun had been associated with the company since his graduation from the University of Virginia.

Louis J. Freundt

Louis J. Freundt, formerly assistant district sales manager of the American Can Co., Chicago, died March 17. He was sixty-six years old.

LOUIS J. FREUNDT

Mr. Freundt retired from active business last December and had recently been made an honorary member of the Chicago Drug and Chemical Association in which he had been active for many years and of which he was a former treasurer.

Benjamin T. Fairchild

Benjamin Thomas Fairchild, president of Fairchild Brothers & Foster, pharmaceutical manufacturer, New York, died March 25 as the result of a fractured skull caused by a fall in his home in Greenwich, Conn. He was eighty-eight years old.

He was born in Stratford, Conn., and was graduated from the Philadelphia College of Pharmacy in 1872. He first became associated with Caswell, Hazard & Co., New York. In 1878 he formed a partnership with his brother, Samuel W. Fairchild, and in 1881 Macomb G. Foster joined the firm and its name was changed to Fairchild Brothers & Foster. In 1891 the company was incorporated and Mr. Fairchild was elected president.

He was a trustee of the Philadelphia College of Pharmacy and a member of the council of New York University.

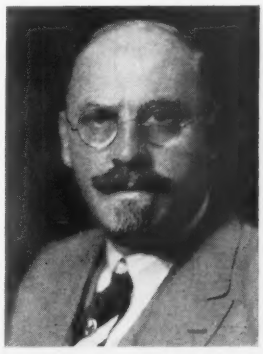
O. H. Glover

O. H. Glover, of the Chicago Cork Works, Chicago, died suddenly of a heart attack March 20.

Watson A. Guthrie

Watson A. Guthrie, president of the Edward Ermold Co., manufacturer of labeling equipment, died April 1 at the New York Hospital. He was fifty-eight years old.

Mr. Guthrie was born in New York and was graduated from the Columbia Uni-



WATSON A. GUTHRIE

versity School of Pharmacy in 1898. After engaging in the drug business for about ten years, he joined the Edward Ermold Co. in 1911, soon becoming secretary-treasurer of the company. At that time the business occupied one and a half floors in the building which occupies almost a whole city block and which was soon afterwards taken over in its entirety by the Edward Ermold Co. The expansion of the business was in a large extent due to Mr. Guthrie's broad program of selling and advertising in diversified industries.

In 1906 Mr. Guthrie married Emma J. Ermold, daughter of the founder of the company. He is survived by his daughter, Mrs. Edward T. Bischoff.

Franklin Gruman

Franklin Gruman, of the J. B. Gruman Co., drug miller, Newark, N. J., died suddenly of a heart attack February 24. He was seventy-six years old.

Mr. Gruman was the son of Jeremiah B. Gruman, founder of the drug milling firm, and he entered his father's employ in 1854.

Clarence Hampton

Clarence Hampton, secretary-treasurer and production manager of Tyson & Co. Inc., Paris, Tenn., died March 15 after a short illness. He was thirty-six years old Mr. Hampton who was prominent in business, civic and church affairs in Paris, had been associated with Tyson & Co., Inc., for eighteen years.

Jervis Ralph Harbeck

Jervis Ralph Harbeck, former vice-president of the American Can Co., died in a Long Island hospital March 26. He was sixty years old.

Karl A. Heinzen

Karl A. Heinzen, formerly president of the Bayer Co., Inc., died at his home in New York, March 23. He was forty-eight years old.

Mr. Heinzen was born in Canton, Ohio, and upon his graduation from Ohio State University entered newspaper work in Canton. After the War he joined the staff of Sterling Products Co., and in 1935 became president of the Bayer Co., a subsidiary. In 1937 illness forced him to resign from this position.

In 1938 he had recovered sufficiently to become a vice-president of Stack-Goble Advertising Corp., and was at this desk there the day before his death.

J. H. Z. Stallman

J. H. Z. Stallman died March 25 at the age of seventy-four in London, England. He was born in New York, a son of the late J. H. Stallman of the company of Stallman & Fuller, crude drugs. In 1886 he was sent abroad to manage the company's London office. In 1908 he established his own company in London to deal in drugs, spices, gums and essential oils as importer and exporter.

Emanuel von Salis

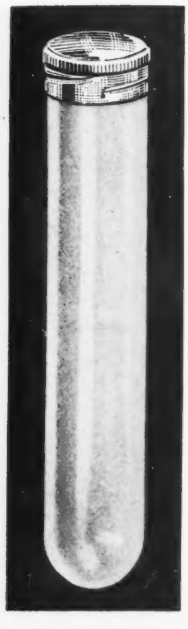
Dr. Emanuel von Salis, former general manager and vice-president of the Bayer Aspirin Co., Rensselaer, N. Y., died in Beverly Hills, March 8. He was eighty years old and had gone to California for a vacation two weeks previously.

Dr. von Salis was born in Basle, Switzerland. He came to this country in 1898, and entered the employ of the Hudson River Aniline Color Co. at Rensselaer, later becoming manager. He continued this position when the company was taken over by Friedrich Bayer & Co. in 1903. Dr. von Salis is credited with having introduced aspirin in this country in 1904. When the Bayer company was taken over by the Alien Property Custodian in 1917, he was general manager and vice-president. In 1918 the company was sold by the Alien Property Custodian to Sterling Products, Inc., and the dyestuff business was separated from the pharmaceutical. Until 1926 Dr. von Salis served as general manager and vice-president of both companies. He then devoted his entire time to the Bayer company as laboratory plant manager, retiring in 1934.

LUSTEROID

For Packaging and Sampling

DRUGS ★ COSMETICS ★ SMALL OBJECTS



LUSTEROID rigid cellulose tubes and vials are unbreakable and 75% (approximately) lighter than glass (saving on wadding, packing, shipping).

LUSTEROID'S labels are multi-color and applied as an integral part of the manufacture.

LUSTEROID packages are custom-made to particular needs. Easy to fill. Most types of closures can be used.

LUSTEROID maintains a creative service for manufacturers.

A note or phone call will bring an answer to your packaging problem without obligation.

LUSTEROID CONTAINER CO., Inc.
Formerly Lusteroid Division of Sillcocks-Miller Company
10 Parker Ave., W. S. Orange, New Jersey

Specify...

New Jersey Zinc

U.S.P. ZINC OXIDE

...for purity

...for cleanliness

...for fineness of particle size

...for adhesive power

...for opacity to ultra-violet light

...for ease of tinting

...and as the finest, whitest grade of highest quality raw material.

Uniformity and dependability are assured by over ninety years of manufacturing experience.

The New Jersey Zinc Company
Established 1848 Products Distributed by
The New Jersey Zinc Sales Company
160 Front Street, New York
Chicago Cleveland Boston San Francisco

INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

Recipes and Menus for Allergics, by Myra May Haas, 250 pp., Dodd, Mead & Co., New York, $2.50.

It may come as news to some cosmetic manufacturers and perhaps even to some drug manufacturers that their products are not responsible for all the allergy in the world, even if it seems that way at times. Many persons are allergic to various foods and to them this book is a distinct blessing. A doctor who is an allergy specialist and a home economist collaborated with the author and what with drawings by Soglow besides, this is a grand book.

A System of Chemical Analysis, by E. H. Swift, 589 pages, Prentice-Hall, Inc., New York, $6.00.

The system of analysis presented in this book is the result of more than ten years of experimental investigation and gives not only sensitive qualitative information but also a certain amount of quantitative data. Major emphasis has been placed here on analytical methods, not, as has been customary, on a general exposition of theory, often far too advanced.

Bacterial Metabolism, by Marjory Stephenson, Sc.D., with diagrams, 391 pp., Longmans, Green & Co., New York, Cloth, $7.50.

Animals and plants have attracted attention by the interest of their forms and the multiplicity of their functions; microbes on the other hand have little of morphological interest to offer but rely on the variety of their chemical potentialities which are vastly greater than those of the animal and plant world.

The chemical activities of bacteria first made themselves known in the phenomena of fermentation, putrefaction and disease; but, as Pasteur constantly pointed out, these can be understood only by studying their relation to the metabolism of the agents causing them.

This is sufficient justification for the present work and renders it indispensable to bacteriologists, pathologists, botanists and soil chemists.

But to the biochemist it makes an additional appeal, for in bacteria he finds a number of naturally catalysed reactions far exceeding in number and variety those found in the animal and plant kingdoms, whilst every year brings to light new and unsuspected mechanisms by which the various groups of bacteria are enabled to carry on life in the various peculiar environments which they happen to occupy.

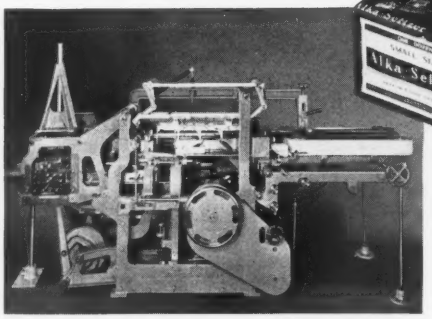
In this advanced textbook of the subject, entirely rewritten since its first appearance in 1930, the author has incorporated the many important advances and developments which have occurred during the intervening period.

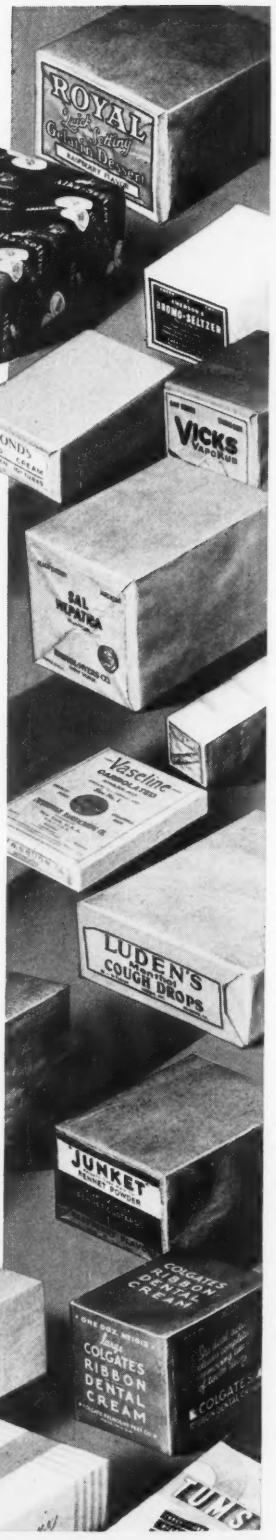
Casein And Its Industrial Applications, by Edwin Sutermeister and Frederick L. Browne, American Chemical Society Monograph Series, Second Edition, Illus., 433 pp., Reinhold Publishing Corp., Cloth, $6.50.

In view of the marked changes that have taken place in the past decade it was felt that a new edition of this book was needed. Although there is some rearrangement of chapters, the general plan and scope of the book remains unaltered. Nearly all the chapters have been thoroughly revised or completely rewritten, as far as practicable by the original authors. With each chapter more extensive citations to the literature, particularly to the patent literature, are included. Table of Contents: Casein in milk and its isolation; The organic chemistry of casein; The physical chemistry of casein; The manufacture of casein; Testing and analysis of caseins; Storage of casein; Casein plastics; Casein glues; Casein in paper making; Casein paints; Casein in the leather industry; Alimentary and medicinal uses of casein; Miscellaneous uses of casein and statistics.

Your Next Step

in lowering packaging costs





For the manufacturer using automatic cartoning or wrapping machines, the next logical step to lower costs is machine bundling . . . And a bundling machine need not be used to capacity in order to show striking savings. Here's why:

The strong, heavy paper used for bundling costs 60% less than made-to-order boxes. So right from the start, machine bundling makes this striking saving on *material costs*.

On top of that, bundling paper weighs 1/3 as much as boxes—reducing *transportation costs* all around (This is actually a double saving as containers must be shipped from box factory to you, and then from your plant to distributor).

Labor cost is also reduced—the machine requires but one operator to do the work of many packers.

A fourth saving is on floor space. Users of our bundling machine have saved as much as 50% of the floor space formerly required for packing.

Send us a number of your packages and we will return them to you bundled on our machine, along with definite figures on machine bundling costs to compare with your present costs.

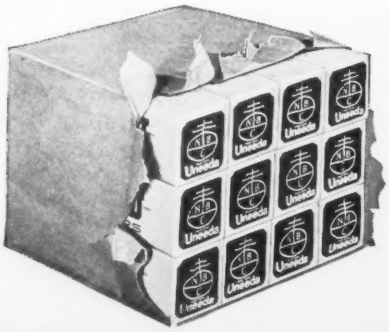
PACKAGE MACHINERY COMPANY - Springfield, Massachusetts

NEW YORK CHICAGO CLEVELAND LOS ANGELES

Mexico, D. F., Apartado 2303 Peterborough, England: Baker Perkins, Ltd.

Buenos Aires, Argentina: David H. Orton, Maipu 231 Melbourne, Australia: Baker Perkins, Pty., Ltd.

Literature on request



PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

PRODUCTION FORUM

BY Francis Chilson
PRODUCTION ENGINEER

PACKAGING SHOW

At the recent Packaging Show Howard Sumner of the Norwich Pharmacal Company conducted a question and answer session on problems connected with the operation of packaging equipment. Among the questions asked and answered in numerous ways was "What average output can be maintained from packaging equipment?" Such a broad question is equivalent to asking "How far is up?" In the first place, the output of any specific packaging machine in a given line is totally unimportant excepting as it relates to the output of the entire line. A line of various kinds of packaging machinery must always be regarded as one machine and the various packaging machines involved are simply elements of that machine. Therefore, perfect production from the line considered as a single machine is the maximum output of the slowest unit involved.

For instance, if a given packaging line has a labeling machine capable of a maximum speed of fifty labels per minute when operated at full speed, perfect production for the entire line is fifty containers per minute, even though other machines in the line may be capable of much greater operating speeds. Now when you want to determine what your average percentage of efficiency should be, the percentage arrived at must be based on the maximum output of the slowest machine in the line. It is my contention that following this logic a glass packaging line having the usual number of operations should be capable of an average output of ninety per cent. We all try, of course, to secure machines for packaging lines that have approximately the same maximum output speed, but this is impossible. In a line having a thirty-five a minute labeler, the filling and capping machines usually can produce forty-five or fifty containers per minute. If a bottle is cartoned and wrapped also, the cartoning and wrapping equipment will be capable of twice the maximum speed of the rest of the units in such a line. But perfect output would still have to be predicated on the maximum operating speed of the slowest unit in the line.

In dealing with collapsible tubes packaged with automatic tube filling and cartoning equipment, one can reasonably expect to maintain an average output of ninety-eight per cent of the maximum operating speed of the tube filler. In dealing with powder packaging equipment, one should expect to maintain an average output of ninety-five per cent of the maximum capacity of the filler. These percentages are based on the previous experience in well-organized plants where packaging materials were made to conform to rigid standards and are predicated on automatic operations where the operator has little to do with the output of the equipment. Most delays are experienced in packaging lines from irregularities in packaging materials. In considering the output of semi-automatic equipment, so many factors are involved that it is difficult to say what percentage one can expect to get out of a given line. The answer to that is to keep the line supplied with material and keep the equipment operating uninterruptedly. Under such conditions you will get very nearly the maximum output of the equipment involved.

TUBE FILLING MACHINE

The Arenco Machine Company Inc., 25 West 43 Street, New York, N. Y., has introduced into this country an automatic tube filling machine which has been used for many years abroad. Provision is made

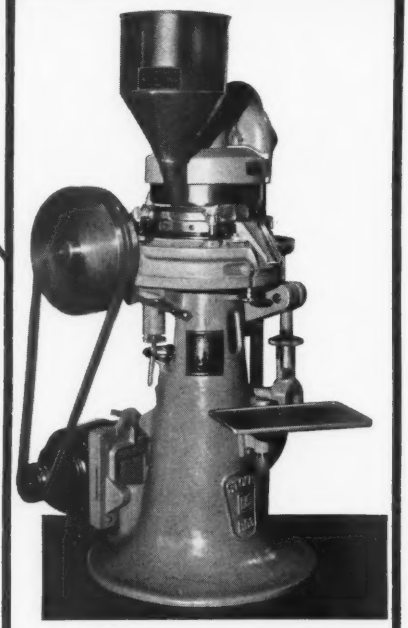
SLUGGING

IS RECOMMENDED FOR

. . . troublesome formulas

. . . heat-sensitive formulas

. . . moisture-sensitive formulas

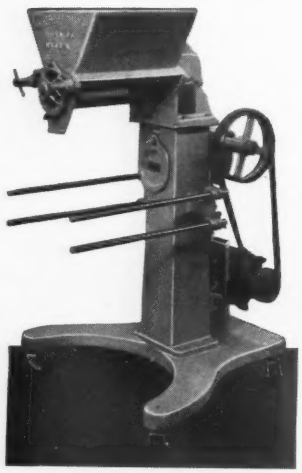


Stokes D-3 Rotary Slugging Press

Slugging or precompressing as a method for preparing granulations for tabletting has certain very definite advantages. It simplifies the problem of combining incompatible drugs or chemicals. It eliminates the wet mixing and drying operations that cause trouble in many materials. It reduces both the amount of equipment needed and the investment necessary to prepare correct granulations. It saves time, floor space and power, also materials handling and other labor costs.

The Stokes D-3 Rotary is the ideal press for slugging. It is a rugged, semi-steel, heavy duty machine, especially designed for feeding fine powders. It has the all-essential Stokes Excess Pressure Release that prevents possible damage to the machine. Its variable speed drive makes available the most efficient operating speed for any specific material.

This machine is also particularly well suited for making finished tablets or lozenges in sizes from $\frac{3}{8}$" to 1". Punches are quickly changed. Correct machine speed for any size tablet is instantly obtainable. Production rates are up to 350 per minute.



Stokes No. 43-A Oscillating Granulator

The Stokes Oscillating Granulator is used for breaking down the precompressed slugs. This machine has the necessary strength for this service, is provided with a special screen, produces uniform granules with minimum "fines."

For slugging-granulating you need only a Slugging Press, a Granulator and a Tablet Machine. Where required output isn't too great or tablets too small the Slugging Press does double duty . . . makes slugs one day and finished tablets the next. Send for more information.

Our laboratory division, with pharmaceutical and chemical engineers and demonstration equipment, is at your disposal to help with all granulating and tablet making problems.

F. J. STOKES MACHINE CO.

5932 Tabor Road Olney P.O. Philadelphia, Pa.

Representatives in New York, Chicago, Cincinnati, St. Louis
Pacific Coast Representative • L. H. Butcher Company, Inc.

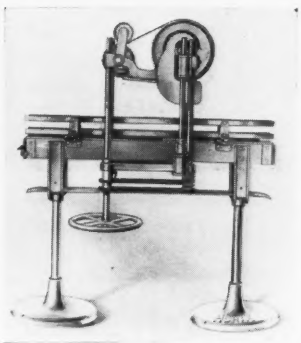
F.J.Stokes **TABLET MACHINES PHARMACEUTICAL EQUIPMENT** FJS Est. 1895

for automatic register of tube panel design. The machine has a long carrier chain for handling the tubes and in general the unit bears a certain resemblance to the new Colton semi-automatic tube filler.

WRAP-AROUND LABELER

The Burt Machine Company, Baltimore, Maryland, has redesigned its wrap-around labeling machine so that it can now be adjusted from size to size without change parts by means of hand cranks. The unit is very much more simple than it was formerly and the operating speed of the machine is beyond anything ever required by this industry.

CORKING MACHINE



The Horix Manufacturing Company, Corliss Station, Pittsburgh, Penn., has introduced a semi-automatic belt type corking machine. This device consists of a conveyor belt section above which is mounted and synchronized with it a small belt pressure unit. The pressure unit is mounted at a tangent and serves to drive corks gradually so that there is no danger of the bottles tipping over as there is under corking wheels.

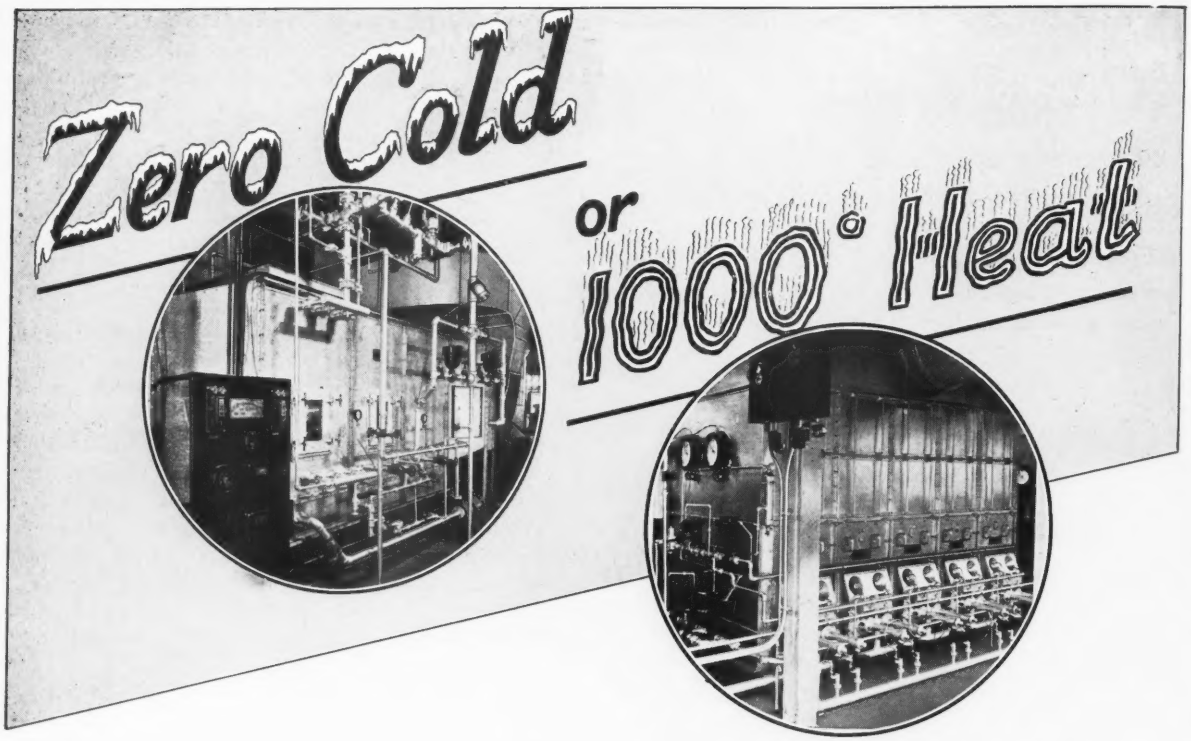
EQUIPMENT OBSOLESCENCE

We continue to get riled up by accounting methods which have no basis in logic or in fact but which interfere with intelligent plant development. Unfortunately the Government does not permit equipment to be written off too rapidly. Equipment ought rightly to be written off against the savings made possible through its use as fast as savings accrue. If a machine costing five thousand dollars effects a saving of ten thousand dollars the first year, the manufacturer who purchased it is five thousand dollars ahead at the end of the year and the machine, therefore, cost him nothing. I am fully aware of the fact that the Government would not permit such a radical method of depreciation. Possibly every firm ought to keep one set of books for tax purposes and another for management purposes. Under the present method of accounting, a machine may save several times its value in the course of three years and it will still stand on the books—assuming a ten year depreciation rate—at seventy per cent of the installed cost. Now, then, if the production man can save some additional money or increase the flexibility of his output, or if, on the other hand, new packaging materials or new packages have been introduced which have made the old machine obsolete, he must match the potential savings against the total value of the equipment which would have to be written off plus the usual depreciation and installation charges on the new equipment. In such instances, although the equipment has saved its original cost many times over, it still represents a bookkeeping valuation which is taken into account in determining the economics of a new machinery purchase.

Recently in doing a reorganization job for a big plant I made the statement that a certain amount of money could be saved during the first year through the introduction of certain types of equipment. The old equipment was so obviously junk and so antediluvian in character that it never occurred to me that it stood on the books at anything whatever. I did not know that a reappraisal of the junk in the plant had been made a few years previous and new values had been placed on all equipment. Accordingly, at the end of the year, although the operating payroll was about sixty thousand dollars less than it had been the year previous, for a similar volume of business, I was told that I had not effected any "actual" saving at all because the value of the equipment which was junked and had to be written off amounted to fifty-two thousand dollars. Here is a case where some figures on a piece of paper are believed to counteract actual dollars in the till. There does not seem to be any sense to it.

One answer would be to carry the present accounting methods along and to take all equipment writeoffs directly into the profit and loss statement as management charges rather than operating charges. A second method would be to follow the procedure which I understand prevails in railroad accounting; namely, to add the value of the junked equipment to the value of the new equipment which was purchased to replace it, and to continue the same depreciation rate. This would speed the retirement of the old equipment and in my opinion would reflect a truer picture of actual operating conditions. Some rational method of approach should be adopted because when new equipment, especially automatic equipment, is used to replace some ancient apparatus, tremendous savings are made possible at the time of the first installation. These tremendous savings never again can be duplicated.

For instance, I once installed a line of equipment which saved $1.18 a gross on a particular item or a total of about twenty-five thousand dollars a year. Since that equipment was installed, improvements have been made which would make it possible to effect a further saving of a few cents a gross. But under present methods of accounting the actual investment required is not economically justified because of the book value of the old equipment which would have to be charged to expense. Accounting is certainly inelastic and I am afraid that too many accountants feel that business exists for the purpose of keeping books. They are nice fellows as a rule, but a bit dogmatic. You can move forty tons of machines out of a plant much easier than you can get an accountant to rearrange some figures on a piece of paper.



the air can be supplied with ROSS Air Systems

Hundreds of exacting processing operations are not only being successfully completed with ROSS pure air systems, —but with far greater uniformity of production. They are designed for maintaining any temperature—from Zero to 1000° F. If it's a job for AIR—it's a job for ROSS Air Systems. They embody 25 years of specialized experience. What's your problem?

BAKING
DRYING
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J. O. ROSS ENGINEERING CORPORATION

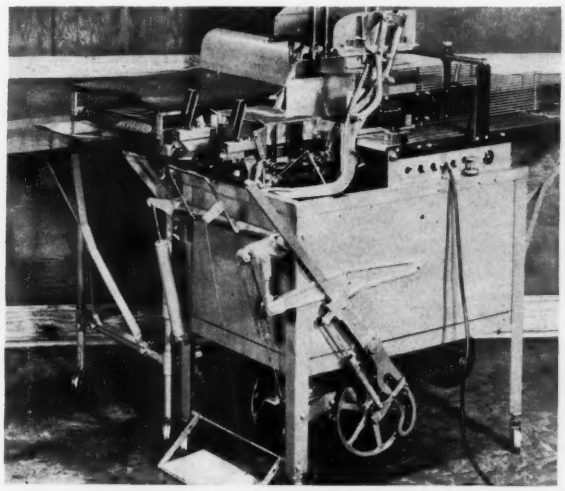
Main Office—350 MADISON AVE., New York, N. Y.

CHICAGO, ILL. DETROIT, MICH. PITTSBURGH, PA. PORTLAND, ORE.

ROSS ENGINEERING OF CANADA, LIMITED, Dominion Square Building, Montreal

WRAPPING MACHINE

The Miller wrapping machine with which you are familiar has been provided with a gluing mechanism so that it now can be used for craft paper as well as for heat sealing cellophane. This little machine makes a very good bundling unit and it is recommended to you for that purpose as well as for the variety of small lot wrapping with which you may have to deal.



Of further interest in connection with the Miller wrapping equipment is the development of pleating fingers for bottle wrapping. The development of this device makes it possible to wrap round and flat bottles with a neatly pleated top finish. The paper is not twisted around the bottle now but is pleated from the shoulder of the bottle to the top of the closure.

NUMBERING MACHINES

I am beginning to believe that the proper way to code packages is to number them seriotum instead of allowing a number to each batch. I don't know that anyone has developed continuous numbering machines for labeling and other packaging equipment, but I hope such machines will soon be available. Serially numbered packages would have many advantages over the present method. By numbering the cases also, it would be possible for merchandising departments to keep closer tabs on distribution and would give them better control over the activities of their customers. Price cutters, for example, could be traced very easily.

In operating a plant, it frequently happens that a batch of goods goes wrong shortly after it has been put into stock. I have seen cases where the entire stock of a given item had to be hauled back and opened up because there was no way of telling in a stack of case goods which had been produced on a particular run. It happens sometimes that filling equipment gets out of adjustment and bottles get past the inspectors without being caught. There is no way of locating such bottles after they have been packed in the cases and delivered to stock without opening up an excessive number of cases.

ABBE IMPACT MILL

The Abbe Engineering Company, 50 Church Street, New York, New York, has further improved its small impact mill. This is a handy machine for a tablet department because it can be used either for fine or coarse grinding as required. It is very easy to clean because the entire screen arrangement and the grinding elements can be exposed by opening a door which forms a side of the housing.

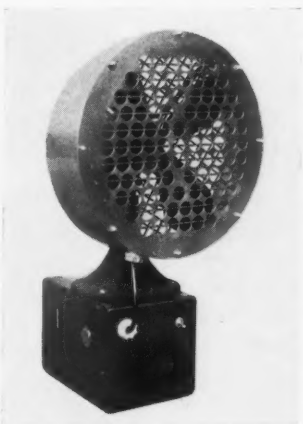
ROLLER-TYPE JAR MILL

The U. S. Stoneware Company, Akron, Ohio, has just brought out an entirely new design of all-purpose and highly-convenient "Roller-type" jar mills for the grinding and mixing of pigments, minerals, inks, etc. They require no clamping into frames or housings and their simplicity makes them extremely low-priced.

The revolving rollers are of rubber-covered steel and are mounted in brass bushed bearings. Standard sizes are arranged to accommodate one, two, three, or four "Loxeal" jars, which are made of chemical stoneware tapered at one end to a 4½" opening. The lids are gasketed and held in place by means of a patented clamp. The mills are guaranteed for heavy duty and are good for a lifetime of continuous operation. The motors are of the continuous-duty, geared-head type. The outside dimensions of the one-jar size are 13" wide by 25" long. The two-jar mill is 13" wide by 42" long, each extra jar adding about 17" to the length.

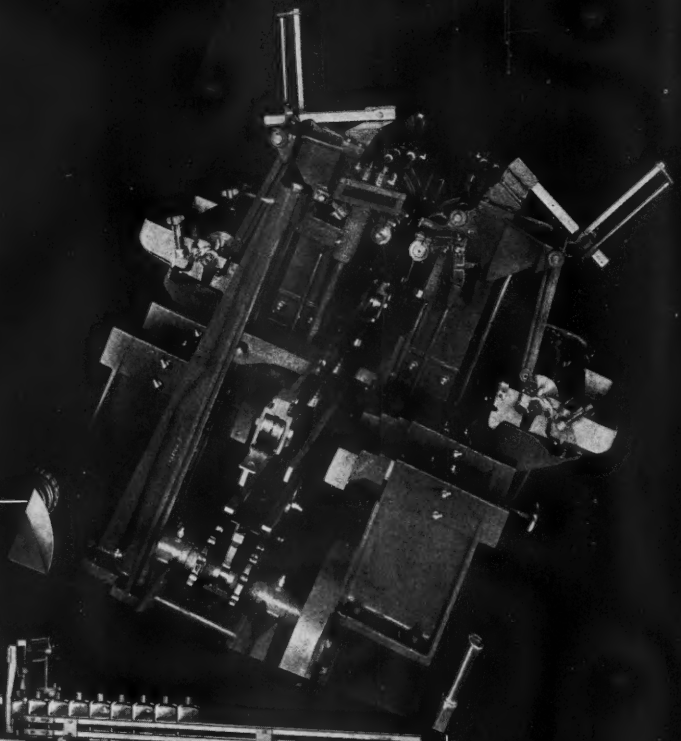
NEUTRALIZING STATIC ELECTRICITY

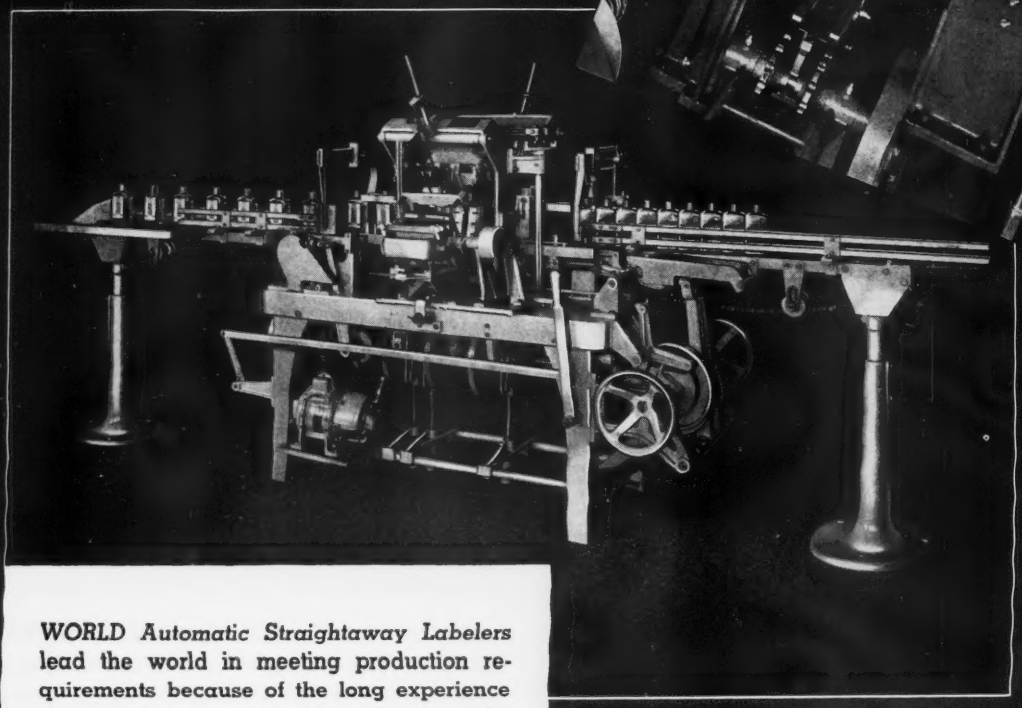
An ionizing device has recently been developed by the Simco Company, 4929 York Road, Philadelphia, for the purpose of producing very high concentration of ions in air. It is applicable to wrapping, printing, and labeling machinery in operating which static sometimes causes trouble. It can be designed to cover any present air outlet or can be furnished mounted in front of a fan.



It consists of a flat metal plate with very closely spaced holes drilled in it. A series of Simco miniature static bars are mounted on the back of the plate and suitably insulated from it. In the exact center of each hole there is a very sharp point just short of flush with the outer surface of the plate. The bars are charged by means of a special Simco Midget power unit capable of producing either a plus, minus, or both plus and minus potentials, alternately. The air as it passes through the holes is

WORLD
AUTOMATIC STRAIGHTAWAY LABELER





***WORLD** Automatic Straightaway Labelers* lead the world in meeting production requirements because of the long experience *that is built into each machine. For example:* Note the method for advancing and supporting bottles through the labeler to each station. *Each individual bottle is controlled* by overhead bottle gripping mechanism by means of plungers which compensate for slight variations in bottle heights. This means accurate and automatically timed labeling. Each bottle receives two separate and distinct pressure wiping operations. This means every label is firmly affixed; it is never necessary to retouch or remove excess gum from bottles.

WORLD LABELERS

ECONOMIC MACHINERY COMPANY

MAKERS OF COMPLETE LINE - WORLD AUTOMATIC AND SEMI-AUTOMATIC LABELERS

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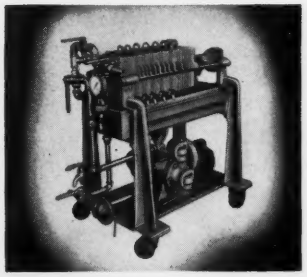
highly ionized and is capable of removing electric charges from any material, vapor, or the atmosphere itself at a distance of ten feet or more. Practically no ozone is produced by the ionizing plate, not even an odor of ozone. The ionizing plates are frequently made in the form of circular discs in all sizes up to four feet diameter. The concentration of one million ions per cc. was necessary to remove charges from rapidly moving materials, but much small concentrations were useful in discharging powder-laden air or air containing inflammable gases.

LABORATORY FILTER

A portable filtration unit that combines in one small compact machine every desired feature for simple filtration, cake washing, and partial drying or clarification, decolorizing and bleaching has been designed by T. Shriver and Company, Harrison, New Jersey. The filter press is arranged with 7" square filter plates and frames for open or closed delivery. Any number of chambers may be arranged for variable capacity. For clarification of liquids, the filter may be used with or without filter aids, activated carbon, or other compounds.



A Shriver diaphragm pump with strainer is used to feed the filter but it is so piped as to permit its use independently of the filter. The advantages of such a pump lie in the fact that the materials handled do not come in contact with the mechanical parts of the pump, permitting a free flow of fluids of viscous, corrosive, abrasive or difficult nature at pressures up to one hundred pounds without danger of injury to pump mechanism.

This type of complete filtration unit is useful not only for experimental operations in laboratories, but also for accurate determination of filtering cycles on a pilot plant basis and for small scale production jobs. All filter press and pump parts, pans, trough, and piping may be made of cast iron, bronze, aluminum, nickel, monel metal, or stainless steel, or rubber and rubber covered metal.

NEW MIXER

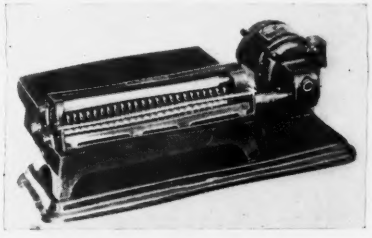
The Patterson Foundry and Machine Company, East Liverpool, Ohio, have a new dry blender in which the basic principle of operation is the division of the material into thirds by geometric progression, in addition to which the material undergoes the conventional mixing process during its travel, due to rotation of the cylinders. The material fed to the blender at the left enters a single helicoid screw flight fastened to the outer shell, traveling one-third the length of the blender where it enters a double helicoid screw flight, thus being divided into two distinct streams. When the third compartment is reached, the material enters a triple helicoid screw flight and division into three distinct streams is accomplished.

Each of the three compartments of the outer cylinder is equipped with an individual scoop, which picks up one-third of the material and deposits it in the inner cylinder. Again it is divided into sections traveling left toward the starting point the length of one compartment, or one-third the length of the blender, where one stream is permitted to return to the outer cylinder and a double stream carried through the second compartment. Another stream is dropped at the end of the second compartment and the third near the feed end of the machine.

The result is mechanical division in thirds, and because of geometric progression the mixing proceeds rapidly, four cycles causing eighty-one divisions or practically complete mixing. One cycle averages approximately fifteen revolutions. Discharge may be accomplished by reversing the direction of rotation, through the feed opening, or may be arranged at the opposite end. Power consumption is very low, and thorough blending is accomplished without generation of internal heat, crushing of particles, or dead spots.

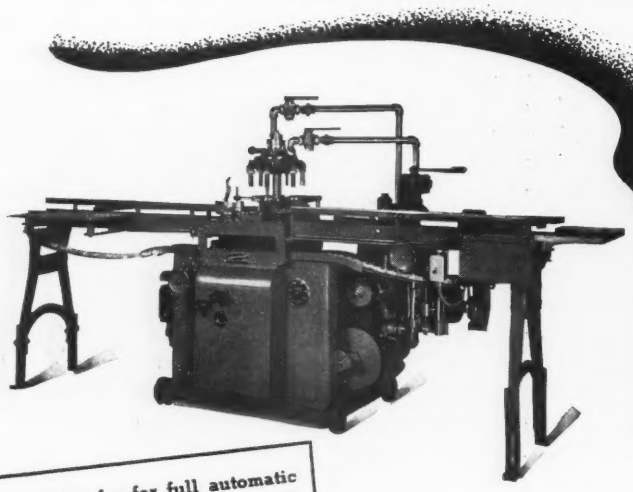
COATING MACHINE

It occurred to me that manufacturers of cleansing tissues consisting of paper or cloth impregnated with cream and manufacturers of gauze impregnated with ointment might be interested in the little coating machine shown in the illustration. This machine made by the Diagraph-Bradley Stencil Machine Company, 3743 Forest Park, St. Louis, Missouri, is a modified label gummer which was originally designed to apply rubber latex to cloth.



DUAL FILLING MACHINE

Virtually all of us are confronted with the problem of using the same filling machine for many kinds of products. One of the problems encountered in switching such equipment from one product to another is the loss of time required to clean the filling equipment thoroughly. The Pneumatic Scale Company, Norfolk Downs, Mass., has solved this problem through the development of an automatic vacuum filling machine equipped with a dual set of filling mandrels and a dual filling system. While one product is being run through



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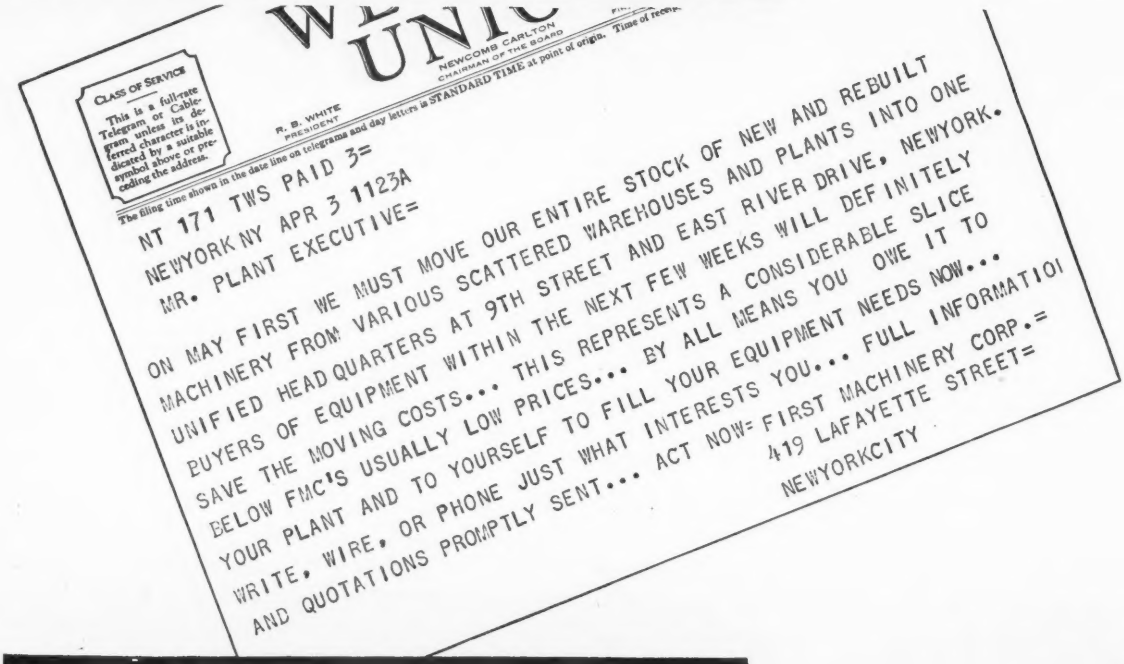

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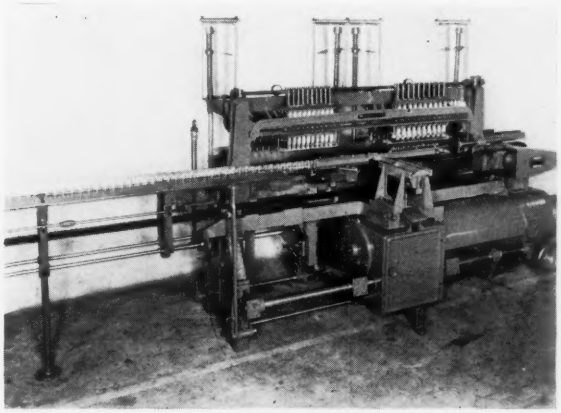
one division of the machine, the other filling system can be set up for the next so that the switch from one to the other can be accomplished instantly. This construction is of great value particularly when the containers have been standardized and it is possible to switch



from one container to another without making adjustments for variations in size. I regard this as a very definite forward step in the development of filling equipment because it makes possible changes in output without idle time on the part of equipment or of operators.

OINTMENT MILLING

Something really new and interesting has been developed in the paint industry in the form of a mixing roller mill which can be utilized in the manufacturing of creams and ointments. This machine consists of a heavy vacuum cylinder with a means of loading and discharging it and fitted with an internal mixing and milling mechanism mounted on a central drive shaft. Four milling rollers are mounted on trunnions so that they are in contact with the cylinder wall. Turning the entire assembly in clockwise fashion serves to mix the ingredients thoroughly as the rollers mill them against the cylinder wall. The rollers of course turn likewise so that the milling action is very thorough and effective.

From the construction of this machine it is obvious that here is a good unit for the manufacture of ointments, cosmetic creams, and suspensions in general. There is no apparent reason from the construction of the unit why it could not also be utilized in the manufacture of face powder. The machine is comparatively inexpensive and can be constructed of stainless steel or any desired material. Cleaning is said to be accomplished by means of solvents or hot water, depending on the nature of the product made in the unit. It is claimed that experience with this machine in the paint industry has shown much faster and more perfect results in the manufacture of paint than with any other type of milling or mixing equipment.

One reason for the speed and milling effectiveness of this equipment is that the mixing and milling cycle is carried on under vacuum. I saw a report prepared by Dr. O. E. Madison, Associate Professor of Chemistry at Wayne University, on comparative tests made in this machine. One of the materials was a house paint containing sixty per cent. pigment and forty per cent. vehicle. The pigment contained heavy metallic oxides such as zinc oxide, titanium dioxide, white lead, etc. Operating under twenty-five inches of vacuum, perfect dispersion was secured in approximately one-fourth the time required in the usual equipment, such as pebble mills. A number of comparative tests were reported on dealing with samples of varying pigment concentrations. All the tests substantiated the efficiency of this mixing and milling device.

The machine is known as the Byers Vacuum Disperser and is made by the Byers Manufacturing Company, 1262 Campau Avenue, Flint, Michigan. One, twenty, fifty, and one hundred gallon sizes are obtainable and all are equipped by direct motor drive.

SEMI-AUTOMATIC BLOWER

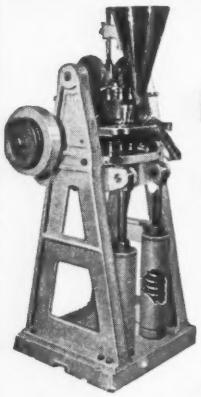
Operators of semi-automatic filling equipment will be interested in the semi-automatic inverted bottle

blower recently offered by the Pneumatic Scale Company. This cabinet-like unit is set up next to the filling machine so that the operator can blow bottles two at a time as she feeds them to the filling equipment.

SEND FOR A COPY

"Material Handling Equipment" is the title of a catalog issued by Standard Fibre Specialty Corporation, 92 Bogart Street, Brooklyn, N. Y. This catalog is useful because it lists such a variety of light weight fibre material containers such as tote boxes, drums, tanks, waste paper baskets, barrels, portable drums, trucks, etc.

The Clebar Watch Company, 551 Fifth Avenue, New York, N. Y. has issued an extremely interesting booklet on all sorts of stop watches. Some of these are the usual type; others are equipped with accumulating dials so that the amount of production per minute and per hour can be read off directly.



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Single and Double Action

Without a peer from the standpoint of *rigidity of design,* as well as for *durability* and *low cost of maintenance.*

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CONTROLLED and perfectly UNIFORM drying is often important to the color and texture of a product . . . and in the drug and cosmetic industry, especially, any variation in color and texture often means the difference between high and low quality. Proctor Dryers, whether of the standard cabinet tray type shown above or machines especially designed for a particular drying problem, have earned a reputation in a large number of installations for drying pharmaceuticals, cosmetics and allied products *correctly,* efficiently and economically.

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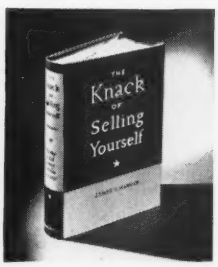

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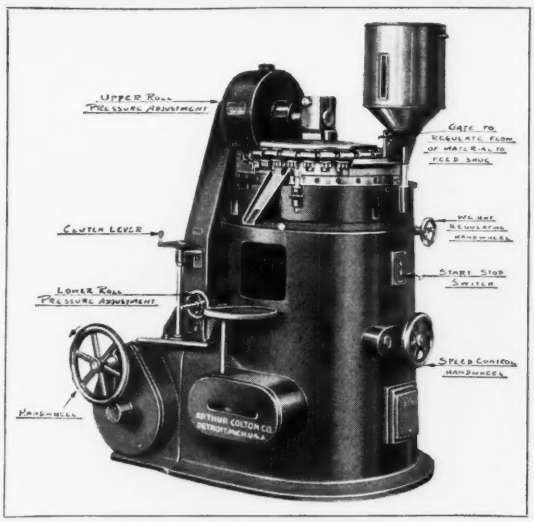

SPECIFICATIONS

Capacity per minute (single punch)	700 tablets
Capacity per minute (triple punch)	2100 tablets
Maximum Size, Single	1 inch
Maximum Size, Triple	7/16 inch
Maximum Depth Cell	3/4 inch
Dies, Outside Diameter	2 inch
Motor equipped (enclosed in Base)	3 H. P.
Punches for single interchangeable with No. 3 Rotary with exception 25 instead of 16 each comprise a set.	
Floor Space	41 x 52 inches
Net Weight	3600 lbs.
Boxed for export	45" x 54" x 68"
Gross Weight	4400 lbs.

THE NEW No. 7 COLTON

MOTOR DRIVEN

ROTARY TABLET MACHINE

SINGLE PUNCH

The Rotary Table carries a set of twenty-five Punches and Dies and when operating at maximum speed employing single punches would produce 700 tablets per minute.

TRIPLE PUNCH

When arranged for triple punches and dies, 7/16" is the maximum diameter recommended for triple operation and operating at maximum speed would produce 2100 tablets per minute.

GENERAL CONSTRUCTION

New design shoe, insuring full dies and preventing granulation from separating.

Feed accomplished at point of Lower Punches dropping in the Dies, a very important feature in compressing many materials.

Rotary Table rests on Ball Thrust Bearings, constantly bathed in oil.

Motor Drive with Reeves Variable Speed Pulleys, built into base of machine, housed away from all dust.

Pressure adjustment on *upper* Punches, accomplished with worm adjustment operating Eccentric Steel Sleeve. This is a new feature.

Power Drive-Combination Worm and Spur Gear.

Hopper arranged with gate to regulate uniform flow of material to Feed Shoe for different sizes of tablets and different materials.

Head of Machine housed against dust.

We also make a complete line of Pharmaceutical Equipment.

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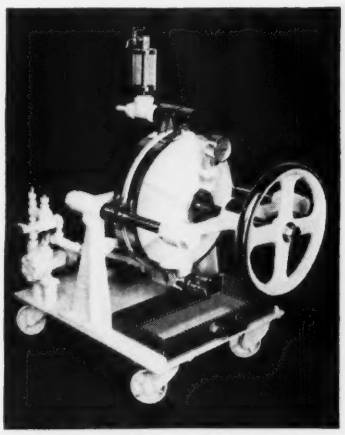

MODEL EBW

Featuring the hand-wheel which permits the loading of the asbestos filter sheets into the filter by simply turning the wheel, eliminating the old fashioned method of tightening the filter with a number of bolts and wing nuts.

Equipped with a *silent* pump delivering three gallons a minute, which can be used as a transfer pump when not filtering.

Furnished in bronze, nickel plated or in hard rubber.

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FILLING MACHINES—paste—Karl Kiefer. Visco, Elgin 2-spout, Wire piston type, Colton hand tube and jar.

FILLING MACHINES—powder—Day auger, Stokes 15-A, Stokes 15-C, Stokes and Smith, Pneumatic scale 12-spout.

GLASS LINED TANKS—open and closed, 10 gallons to 500 gallons.

SIFTERS AND MIXERS—Dry powder—50 lbs. to 4000 lbs.

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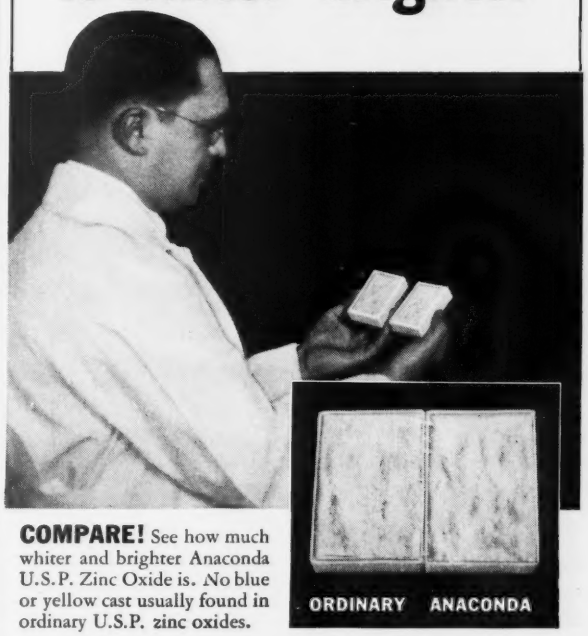

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FATTY ALCOHOLS

Cetyl and other saturated alcohols possess very valuable properties and there is good reason for their inclusion in most formulas now published. Cetyl alcohol is a member of a homologous series which includes other equally valuable compounds. Myristyl alcohol, the C14 alcohol, as well as Lanette wax, a mixture of C16 and C18 alcohols, have been commercially available for some time and now the C18 stearyl alcohol is being offered. All of these alcohols closely resemble each other. They are waxy solids, the melting point increasing with the molecular weight.

Pure cetyl alcohol may often be satisfactorily replaced by a clean, white technical product but cheaper grades, containing odorous unsaturates may cause trouble. The pure saturated alcohols cannot become rancid, and this holds true for technical grades consisting only of mixtures of the saturated fatty alcohols.

The higher saturated alcohols are fat-soluble compounds quite similar to fats. They are not greasy, however, and do have a tendency to lessen the shine caused by the presence of fats and oils.

Proportions in various creams and non-emulsified cosmetics they give an added smoothness to the texture, without at the same time giving an added greasiness.

Relatively large proportions have a marked effect on viscosity, this effect being most marked in the case of stearyl alcohol, which, on account of its higher melting point, is more effective, weight for weight, than either cetyl or myristyl alcohols.

This effect is an important one, since, in general, its tendency is a stabilizing one. Moreover, the alcohols are easily emulsified in water by means of suitable emulsifying agents, of which possibly the sodium salts of the acid sulfates or acid phosphates of the alcohols themselves are most effective, as little as 0.2 per cent. of the former of these derivatives sufficing to produce satisfactory emulsions containing so much as 12 per cent. of mixed fatty alcohols. If other lipoids, such as mineral or vegetable oils, are present, these are also readily emulsified.

The explanation of the ease with which this action takes place is to be found in the increased viscosity produced as a result of the emulsification of the fatty alcohols. In a series of comparative tests stearyl alcohol, weight for weight, was found to be more effective than cetyl alcohol, as it produced a greater increase in viscosity.

The higher fatty alcohols can also be emulsified by means of other emulsifying agents; and it has become common practice to incorporate a little cetyl alcohol in

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vanishing creams in which the emulsifying agent is a soap, such as potassium stearate, made *in situ*. In a series of experiments with cetyl and stearyl alcohols in vanishing creams of this type, the most satisfactory results were obtained by using 0.4 per cent. of stearyl alcohol. A marked improvement in texture, in the direction of increased smoothness, was thereby obtained.

Although the higher fatty alcohols are stabilizing agents for emulsions of the oil-in-water type, actually these alcohols are themselves good emulsifying agents for the production of emulsions of the water-in-oil type.

An interesting series of experiments with cetyl alcohol in this connection was published by Casparis and Meyer in 1935-6. The addition of small proportions of this alcohol to various lipoids was found to effect a marked increase in the proportions of water which they were able to absorb, the increase, however, being less marked in the case of soft paraffin than in the case of true fats.

An earlier series of experiments conducted by Rupp compared the action of technical cetyl and myristyl alcohols. The former was found to be the more efficient. This is most probably due to the fact that the hydrophobic group and the hydrophilic group of the alcohols are nearer together in myristyl alcohol than they are in cetyl alcohol. Ethyl alcohol, in which they are in juxtaposition, is not a lipoid at all but, of course, is water-soluble.

In stearyl alcohol, the two groups are still further apart than they are in cetyl alcohol; hence, it is not surprising to find that stearyl alcohol is more efficient for the production of creams of the water-in-oil type than is cetyl alcohol.

The impetus for both the investigations mentioned above no doubt came from the inclusion, in the Fifth Swiss Pharmacopoeia, of cetyl alcohol and an ointment base, used for making ointments containing water or medicaments in aqueous solution containing cetyl alcohol. From the cosmetic point of view, the most interesting of the official Swiss formulae is that for cold cream, which contains 2 per cent. of cetyl alcohol, 5 per cent. of lanolin, 43 per cent. of soft, white paraffin, 4 per cent. of olive oil, and 46 per cent. of rose water. Curiously enough, Casparis and Meyer found that the lipoid mixture used in this formula is capable of absorbing much more distilled water than rose-water. Increased stability can be given to the cream by substituting stearyl alcohol for cetyl alcohol. The addition of one per cent. of stearyl alcohol to a toilet lanolin compounded from equal parts of lanolin, soft, white paraffin, and distilled water, was found also to give a more stable product and one, moreover, of better appearance.

Some workers, appear to have failed to produce satisfactory creams of a fatty type using cetyl alcohol as sole emulsifying agent. These failures must be attributed either to faulty formulation, or to faulty technique, or to both causes. All the fatty alcohols can be used effectively in this manner; but stearyl alcohol is the most effective, weight for weight. In other words, smaller proportions suffice for satisfactory results.

The table giving the results of the experiments by Casparis and Meyer is a useful guide to correct formulation; but allowance must be made for the fact that water-in-oil emulsions have a habit of exuding water on standing, so that initial maximum water-capacity should never be the aim.

In many cases, however, more satisfactory results are obtained by using fatty alcohols in conjunction with other emulsifying agents for the production of emulsions of the water-in-oil type. The use of lanolin has already been mentioned. Oxycholesterin, which is unusually effective with hydrocarbon product, shou!d also be remembered when formulating fatty creams.

In non-emulsified lipoid mixtures, such as paste rouges, lipsticks, eyeshadow, etc., cetyl alcohol has won favor, since it gives products having a very fine texture. Stearyl alcohol gives similar results and less is generally required to give equivalent effect. *H. S. Redgrove, Manufacturing Perfumer.*

AUXILIARY EMULSIFYING AGENTS

Some years ago we introduced the term "auxiliary emulsifying agent." Maybe we invented the term or maybe we picked it up out of the colloid chemical literature; we have a vague recollection that it may have been used by Winter in some of his cosmetic writings. In any event, some of the British writers on cosmetic subjects have recently decided that the term is "ill-defined, and possibly devoid of meaning." This statement can only be based on complete misapprehension as to the meaning of the term, which we first used in the November 1935 issue of this magazine and explained fully in an article on "Liquid Creams" in the June 1936 issue.

In the latter article we described experiments in formulating oil-in-water emulsions using a small amount of a liquid fatty alcohol, lauryl alcohol. A mixture of mineral oil and water with sodium lauryl sulfate as the emuslifying agent gives an unstable emulsion which was greatly stabilized by the addition of lauryl alcohol. The increase in viscosity was far greater than could be obtained by the addition of viscous substances such as glycerin or even gum solutions. Moreover, the addition of other water-insoluble liquids, such as oils, do not increase viscosity under these conditions, and, finally, the fatty alcohol itself, without the primary emulsifying agent, sodium lauryl sulfate or soap, is completely inert in oil-in-water mixtures.

We can only conclude that substance like the fatty alcohols or monoglycerides of fatty acids have active groups which, in the presence of active surface tension depressants, become hydrated or otherwise activated in such a way as to increase the stability of the oil-in-water emulsion and raise its viscosity. These substances themselves, however, are not emulsifiers for oil-in-water emulsions.

For water-in-oil mixtures, there seem to be few true emulsifying agents. If the emulsion exists only in the solid state and breaks into clear layers when melted, we are forced to assume that a mechanical type of mixture is present, in which individual particles of water are prevented from coalescing only because the viscosity of the mixture prevents them from coming into contact. The so-called water-in-oil emulsifiers used in cosmetics do have the power of increasing the ability of otherwise inert substances to take up and hold water. The mechanism of this action is probably closely related to the ability to act as auxiliaries in oil-in-water emulsions. *JK.*

TESTING DENTIFRICE ABRASIVES

According to M. L. Smith, writing in the analytical edition of "Industrial and Engineering Chemistry," a standard test for grading fine powders used in dentifrices is important because of the possibility of damage to teeth and softer tissues. An abrasion test is more satisfactory than a scratch test, although the latter is useful for detecting coarse adulterants and is more selective. Antimony has several advantages as a standard surface; surface flow does not appreciably interfere with the test if proper precautions are taken.

Results obtained with a modified abrasion apparatus using sized powders show that particle size distribution is important, since for the same abrasion larger particles will give fewer but deeper scratches.

Primarily because of the non-uniformity of organic tissue, it is quite difficult to correlate accurately abrasion as shown by antimony blocks with actual wear of the teeth.

HYDROGENATED OILS

Hydrogenated oils of cosmetic quality have been suggested for use in lipsticks, shaving creams, face creams, of all types, beauty milks, etc.

What are the particular characteristics of hardened oils that make them of outstanding interest to the manufacturer of cosmetics and toilet preparations?

Hardened oils, as now obtainable commercially, are of excellent, usually white, color and are almost completely odorless.

They are available in a wide range of uniform melting points.

By virtue of their consistency, they may in many cases conveniently replace more expensive and less satisfactory waxes.

They make possible the use of vegetable fats that, owing to the transformation of the more highly unsaturated acids, are much less susceptible than the corresponding natural oils to rancidity.

Perfumers Shelf

FLOWER ABSOLUTES

Hyacinth absolute, prepared chiefly in Holland by benzene extraction, was first isolated by Spaltenholz in a yield of 60.5 g. oil from 381 kg. flowers. In the concentrated form it had a sharp, unpleasant odor which only reverted to the natural fragrance of hyacinth after considerable dilution. Today the hyacinth flower oil is produced by several firms. C. J. Enklaar identified the following constituents in the oil: benzyl benzoate, benzyl alcohol, esterified cinnamic alcohol and vanillin. But methyl anthranilate and dimethyl anthranilate could not be detected.

Next to Parma violet, it is one of the costliest absolutes. Apart from fantasy extracts, it finds application in bouvardia, cassie, cyclamen, gardenia, hyacinth, reseda, lily, etc.

Obtained chiefly by extraction, *jasmin concrete* may vary considerably in composition. Everything depends on the method of production.

The oil is used in the perfuming of tea as well as in nearly all fantasy extracts and in the following perfumes: acacia, amber, aubepine, begonia, honeysuckle, chypre, cyclamen, fern, gardenia, broom, glycine, heliotrope, hyacinth, reseda, jasmin, jonquil, lavender, lilac, lily, lily-of-the-valley, mimosa, narcissus, neroli, carnation, opoponax, rose, syringa, sweet pea, tuberose, violet, ylang-ylang, eau de Cologne, etc.

By steam-distillation of jonquil flower extract (from Narcissus jonquilla L.), H. von Soden obtained a colorless oil rapidly turning yellowish-brown in the air. Von Soden identified the following ingredients with reasonable certainty: methyl and benzyl benzoates in appreciable quantities, indol, methyl anthranilate, cinnamic acid esters (chiefly methyl cinnamate) and linalool. According to F. Elze, jonquil extract oil also contains jasmone.

Compositions in which the oil is used include aubepine, honeysuckle, jasmin, jonqui, sweet pea and fancy extracts.

In France and Hungary benzol extraction is practised to give a "lavande concrete" and "essence concrete lavande," a white, pasty mass with a yellowish to green color (in Hungary to dark-green). C. Kleber found mainly esters in the extract, chiefly linalool acetate, also coumarin, while A. Pfau found umbelliferone methyl ether and Y. Volmar and O. Thurkauf also identified coumaric acid, cedrene and chlorophyll.

Lavender concrete is used on an extensive scale in the soap industry and the results obtained naturally depend upon the qual-

"One PHOOF—and Madame is a gypsy skipping barefoot over the open field!"

FROM FLOWER FIELDS TO CONSUMER

IT is a matter of direct concern to every user of perfume materials that an American supply firm *owns* and *operates* its own distilling and extraction plant in one of Europe's most abundant flower producing regions. It concerns and *benefits* them by reason of the quality, satisfaction and practical economies thus assured. To appreciate these benefits fully, it is necessary to distinguish between the supplier who acts merely as selling agent for a foreign line and the supplier who supervises and controls production, through his own organization, from point of origin direct to consumer. For the latter, quality of product and customer-satisfaction become matters of personal obligation and trust, and in their fulfillment, he alone is responsible. Also, in marketing direct, he relieves the buyer of one cost factor which contributes nothing whatever to quality—and that is the broker's or middleman's profit.

Our Seillans factory is the one American-owned plant specializing in floral extraction and distillation on French soil. For the reasons cited above, we commend to you its produce of dependable, moderately priced perfume oils and absolutes. Comparison will prove their worth!

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ENFLEUR is less costly to use than many a cheaper product because so little goes such a long way. Its choice, skillfully blended ingredients make for intensity, stability and persistence—hence economy. It is one of our finest specialties! Why not let us send you a sample that you may judge its worth by personal observation.

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ity of the material available. Lavender absolute of course enters primarily into consideration for lavender water, also in large measure for really good eaux de Cologne and fougere. There is probably no perfumer worthy of the name who does not use the best lavender absolute for fougere.

Mimosa absolute itself is used fairly extensively in many fantasy compounds, as well as in cassie, honey-suckle, cyclamen, glycine, lily-of-the-valley, mimosa, rose, sweet pea, etc. It is certainly one of the absolutes that should be more extensively used by discerning perfumers. *Alfred Wagner, S. P. C.*

NEROL

Rose otto contains another alcohol of rose like fragrance which, perhaps of less importance than the alcohols already dealt with, is, nevertheless, much used in modern perfumery. This is nerol, which, chemically, appears to be a mixture of the *trans* forms of the two alcohols constituting geraniol.

Commercially it may be obtained by isolation from petitgrain oil or from the oil of *Helichrysum angustifolium* DC. Alternatively, it may be got from geraniol by appropriate chemical treatment.

The odor of nerol is rather heavy and persistent. It recalls roses, and at the same time orange-blossom and honey. Commercial products, however, are apt to vary in odor value somewhat, owing to the presence in some cases of geraniol.

Nerol may be used for building up artificial rose odors; but 20 per cent. should not be exceeded, and it is by no means an invariable constituent of these. It may also be usefully employed in bouquets where the rose and orange-blossom notes are desired. A well-known authority strongly recommends it as a base for magnolia perfumes, a type of perfume which has a big vogue in the United Sates. *H. S. Redgrove, Manuf. Perf.*

CITRONELLOL AND RHODINOL

Rose otto contains an optically active alcohol, for which the names "rhodinol" and "roseol" have been proposed; but today it is generally considered to be no more than the levo-rotatory form of citronellol.

Citronellol occurs in a number of essential oils, but the commercial article is not obtained by isolating it from any of these as the isolation of pure citronellol is a matter of difficulty. Commercial citronellol, therefore, is prepared by the reduction of the aldehyde citronellal, the best source of which is Java citronella oil.

Citronellol has the empirical formula $C_{10}H_{19}OH$. Its exact structural formula is doubtful.

Good-grade citronellol has a fine, sweet odor, even more rose-like than that of geraniol, but not so persistent. In the case of poor grades, a camphoraceous off-note in the odor can sometimes be detected.

In compounding artificial rose perfumes, citronellol can be used in massive amounts, up to about 35 per cent. being permissible. It is also much employed as a universal sweetening agent, being especially useful in perfumes in which a rose-like or lily-like odor predominates.

In commerce today, the name "rhodinol" is applied to an alcoholic mixture obtained by the fractionation of Reunion geranium oil, and from a chemical point of view would seem to be a mixture of the levo-rotatory forms of the alcohols constituting citronellol, but perhaps in different proportions, plus some geraniol.

Nevertheless, the odor-value of good grade rhodinol is far higher than that of citronellol. It is more full-bodied, hotter and "fattier."

Good grade rhodinol is not a cheap article, but it is much cheaper than rose otto, and of all single substances is probably the one which comes nearest to the otto in odor. It forms an excellent diluent for the otto; and, when price permits, rhodinol may advantageously replace wholly or in part citronellol in rose and fancy compositions.

Rhodinol is a useful perfume for creams, when a rose-like note is desired. It may advantageously be used in conjunction with phenyl ethyl alcohol, and with rose water. *H. S. Redgrove, Manuf. Perf.*

AROMATICS

Acetonaphthone. This compound, alpha naphthyl-methylketone, is prepared by condensing naphthalene and acetyl chloride. It has a very useful orange blossom odor and can be used together with phenylethyl alcohol and methyl anthranilate in the preparation of artificial neroli.

Acetophenone. This ketone occurs naturally in oil of labdanum resin and forms ninety per cent. of the oil of an Australian plant. It has a persistent and powerful odor, useful in the preparation of perfumes of the type of new-mown hay, syringa, etc.

Amyl Acetate. This ester is used more as a flavor than as a perfume although it is very useful in the blending of fruit odors. It is the basis of artificial hair oil.

Amyl Benzoate. is a powerful fixative and has a slight "amber" odor.

Amyl Heptylate is an oil with a very powerful fruity odor and must be used in very small quantities, as otherwise its odor will predominate.

Anisic Aldehyde. This aromatic is known commercially as auberpine. It is a methyl ether of para-hydroxy-benzaldehyde. It is the basic material for all perfumes of the "May blossom" type.

Benzophenone is a fragrant crystalline body prepared by distilling calcium benzoate or by the condensation of benzene with benzoyl chloride. It is useful in the preparation of heavy odors of the Oriental type.

Benzyl Acetate. This is an ester appearing naturally in oil of jasmin, oil of ylang-ylang, oil of tuberose, and similar flower oils. Its odor is sweet, but not intense; it is prepared synthetically, and is indispensable in the preparation of artificial flower oils of the jasmin type. It should be free from chlorine, since more than faint traces lead to discoloration.

Benzyl Benzoate is found naturally in Peru balsam and is also made synthetically. When very pure it is a crystalline solid, but small traces of harmless impurities keep it liquid at normal temperatures. It has a very slight odor which is useful in floral mixtures, it is a very useful fixative, and an excellent solvent for artificial musk. It should be free from chlorine.

Benzylidene-Acetone. This ketone has a sweet, floral odor and it is used to round off and modify artificial flower oils, especially of the sweet pea type. Because of its exceptionally penetrating nature, benzylidene-acetone should be used in perfumery with extreme caution, and only as a ten per cent. solution in alcohol. When concentrated it is very irritating to the skin.

Bromelia is the bata-naphthol ethyl ether while the methyl ether is known as yara-yara. Both have a pronounced neroli odor, the ethyl ether being the finer.

Butyl Phenylacetate is a colorless oil having an odor recalling that of carnation. It is only used in small quantities, and gives character to the various types of carnation bouquets. Its isomer, isobutyl phenylacetate has a much finer odor.

Citronellyl Acetate is a natural constituent of geranium rose oils, and is a useful addition to most rose or geranium perfumes. Its odor recalls that of bergamot oil.

Dimethyl-Benzyl Carbinol is an isomer of phenyl propyl alcohol. It has an odor resembling that of narcissus, hyacinth, and lilac, and is a valuable aromatic.

Ethyl Anthranilate has a fine neroli odor. It closely resembles methyl anthranilate, but is somewhat sweeter and softer in perfume and does not discolor so readily.

Geranyl Acetate is a very important ester. It is a constituent of many essential oils and is used in the manufacture of numerous artificial perfumes especially those with a rose note.

Linalyl Acetate is the active principle of bergamot oil and is present to a large exe tent in lavender oil. It is used in th preparation of most artificial perfumes of the jasmin, ylang-ylang, and tuberose types.

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It has been extremely difficult to prove, to the complete satisfaction of the scientific-minded, that active materials absorbed by the skin may have more than an incidental local action at the site of absorption. The ordinarily accepted mechanism is assumed to be absorption through the skin into the blood stream and then action by the active substance wherever the blood may carry it. Thus, vitamins incorporated in ointments and cosmetic creams are known to be absorbed by the skin and are capable of preventing and curing rickets (using anti-rachitic vitamin D) in rats. It can be said that human skin is not the same as rat skin in its absorbing powers, but insulin ointments have been successfully used to control the sugar content in the blood of human beings.

These are generalized effects, however, and do not necessarily indicate that the skin surface directly treated with the vitamin cream or ointment has benefited, apart from general improvement of health where a vitamin deficiency is being corrected.

Zondek, rubbing an estrogenic ointment on the nipples of a guinea pig, was able to increase the size of the nipples, but the use of laboratory animals and the procedure prevent completely definite conclusion from being drawn concerning the behavior of human beings under similar conditions. Now C. M. MacBryde, writing in "The Journal of the American Medical Association" for March 18, 1939 proves, beyond reasonable doubt, that sex hormones may be absorbed directly by the human skin and that they have a direct effect at the site of absorption.

He treated three patients with very little or no breast tissue by giving large injections of estradiol benzoate. This, as was expected, caused definite growth of breast tissue, but this growth ceased when the dosage was reduced and there was regression when injections were stopped. After a time practically all of the artificially induced growth disappeared. At this point treatment by inunction was initiated. "An ointment of hydrous wool fat and petrolatum containing 5,000 international units per gram of estradiol or of estradiol benzoate was then applied directly to the breast region. Each day 5 grams, containing 25,000 units were applied by the patient to the breast region on one side,

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rubbed in for five minutes, and allowed to remain on over night. The breast of the other side was used as a control and received the same amount of ointment base, without the estrogen, and the same amount of massage.

"Definite breast growth of considerable degree was produced by the estrogenic substance absorbed through the skin directly into the breast tissue. The untreated breast showed very much less growth. Evidence of absorption of the estrogen into the systemic circulation was found in the change of the vaginal smears from the inactive type to the active estrous state, by change in the vaginal mucosa, by enlargement of the uterus, by relief of the patients' hypogonadal symptoms, and by slight effects on the opposite breast.

"There was little or no difference in the effectiveness of the estradiol and estradiol benzoate ointments.

"The ointments, unit for unit, were more effective in producing breast growth than injections of estradiol benzoate or of estrone. Ointments containing estrone were less effective, unit for unit, than those containing estradiol.

"When breast growth was produced by injections of estrogenic material, there was diminishing effectiveness of the injected hormones. When the hormones were applied to the skin, however, there was a steady progressive growth."

Dr. MacBryde concludes with a warning that this method not be adopted in general practice until further studies can be done and the limitations and possible dangers of the cutaneous application of concentrated estrogens can be defined.

The implications for the cosmetic industry arising from this fine study are of great importance. First we reaffirm our previous statements that hormones are far too powerful and have far too many general systemic effects to be safe for widespread unsupervised use. Nevertheless, we are sure that sooner or later there will be authoritative work to prove the effectiveness of local application of cosmetics to the skin. When this is done, and only then, will it be possible to laugh at detractors. *J. K.*

CHOLESTERIN IN OINTMENTS

Ping-Lu Li and R. A. Kuever, writing in the "Journal of the American Pharmaceutical Association," describe the effects of using cholesterin in pharmaceutical ointments. The ointment base they used consisted of 2 parts of cholesterin melted with 98 parts of white petrolatum and the products were compared with the usual ones made with a straight petrolatum base. The antiseptic ointments tested were mixtures containing ammoniated mercury and phenylmercuric nitrate.

Mixtures were made from petrolatum and the active ingredient and compared with corresponding ointments made with the cholesterin base containing water. The agar plate method was used to test antiseptic power. The ointments made with the cholesterin base containing water had about 50 per cent. greater antiseptic value than those made with petrolatum alone.

It was not determined whether a lanolin base would have been as effective as the cholesterin mixture or whether the use of the water-in-oil emulsion was responsible for the greater diffusion power shown by the new ointments.

EPINEPHRINE IN OIL

Keeney and his co-workers prepared epinephrine in oil by suspending powdered epinephrine in peanut oil. It is so prepared that 1 cc. of oil contains 2 mg. of epinephrine. This preparation is absorbed slowly. Ten patients with chronic asthma who had been taking frequent daily injections or inhalations of epinephrine hydrochloride received relief from asthmatic symptoms for from eight to sixteen hours with from 0.65 to 2 cc. doses of epinephrine in oil. One patient received no prolonged effect from adequate doses. Eleven patients were treated during one or more acute paroxysms of asthma, and remained free from asthma for from nine to sixteen hours, but more generally for twelve hours. For one patient with urticaria and another with serum sickness, epinephrine in oil provided relief from symptoms for twelve hours. The hyperglycemic response to epinephrine in oil was maintained in five cases for at least eight or nine hours, while the response to epinephrine hydrochloride, though more marked, was usually over in three hours. The cardiovascular response to epinephrine in oil in three cases was maintained for eight or nine hours, while with epinephrine hydrochloride it is generally over in from forty-five to ninety minutes. The single injection of epinephrine in oil is preferably made subcutaneously. Consecutive subcutaneous injections are irritating in some cases, but numerous intramuscular injections can usually be made without discomfort. *Arch. Int. Med. vol. 63, p. 119.*

ANTICONVULSANT DRUGS

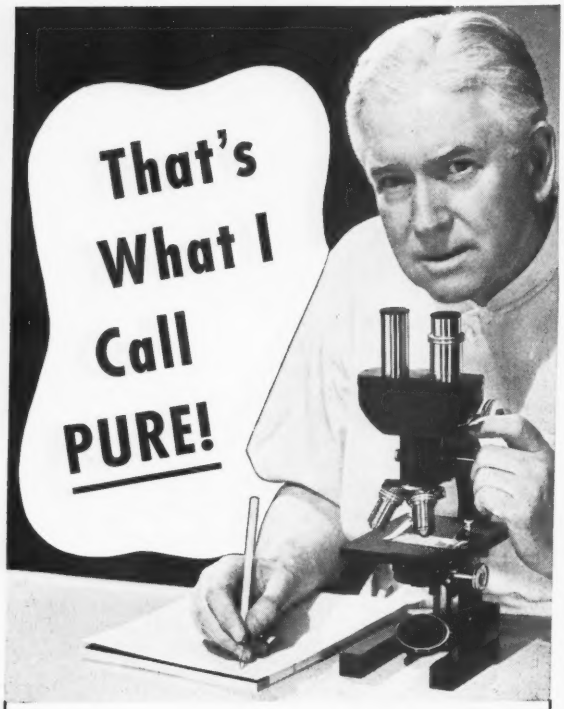
The amount of electric current, passing through the head, required to produce a convulsion in cats, *i. e.*, the convulsive threshold was increased greatly by all drugs tested which produced complete narcosis. The drugs in this group which were relatively ineffective as anticonvulsants in subnarcotic doses were alcohol, sodium amytal, amytal, sodium pentobarbital, *N*-phenylethylpropylbarbital, acetophenetidine and phenyl urethan. Marked anticonvulsant action was shown by subnarcotic doses of phenobarbital, sodium phenobarbital, diphenylhydantoin, acetophenone, benzophenone and acetophenone oxime. The convulsive threshold was not increased appreciably by other drugs tested of widely varying constitution. *H. H. Merritt, T. J. Putman and D. M. Schwab. Trans. Am. Neurol. Assoc., 63, (1937), 123-8.*

DIETHYLSTILBOESTEROL

The synthetic oestrogenic substance 4:4′-dihydroxy-α:β-diethylstilbene has been found to have an action similar to estrone on the uterus of ovariectomized rats, on the mating reaction vagina, and uterus of immature rats, on the uterus of immature rabbits, and on the feathers of capons. By vaginal smear assay on ovariectomized rats under the conditions described, the synthetic substance was approximately two and one-half times as active as estrone. Nipple growth in the guinea pig was produced, similar to that caused by estrone. Preliminary observations indicate that the synthetic substance has appreciably less stimulating action on the mammary tissue than estrone. *E. C. Dodds, W. Lawson and R. L. Noble, Lancet, 234 (1938), 1389.*

SULFANILAMIDE AND TUBERCULOSIS

The experiments on guinea pigs that Ballon and Gueronn report indicate that under the conditions of their study sulfanilamide exerts an inhibitory effect on the development of tuberculosis. Their observations confirm those reported by Rich and Follis. The authors commenced treatment with sulfanilamide five and ten days after infecting the guinea pigs. Repeated relatively small doses of the drug were tolerated better than larger doses given less frequently. Daily doses of from 340 to 380 mg. of sulfanilamide proved adequate yet not too toxic for most guinea pigs weighing 350 Gm. An inhibitory effect on the tubercle is possible even though treatment is interrupted. The effect is shown by the fact that the local lesion in the treated animal is less necrotic: similarly the regionary lymph nodes are less swollen and less indurated, the spleen is considerably smaller and usually free of macroscopic tuberculous lesions. In addition there is a relative absence of generalized tuberculosis in the treated animal. On the other hand not only does the untreated animal have generalized tuberculosis but, in addition, the local lesion is more extensive, more necrotic and the regionary lymph node is much larger and more swollen and indurated. The spleen of the untreated guinea pig is not only large but also exhibits macroscopic tuberculous lesions. The experimental results do not permit clinical application. *J. Thoracic Surg. vol. 8, p. 188.*



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READERS'

WAX DEPILATORY: Can you please send me a formula for a wax depilatory? San Francisco.

A mixture with which you can experiment consists of:

Rosin	52.0
Beeswax	25.0
Paraffin	18.0
Petrolatum	5.0

These materials are merely melted together and the product then carefully poured into molds or appropriate tin boxes.

FOUNDATION CREAM: Will you please send us a formula for a good finishing or foundation cream. Chicago.

We give you two formulas for creams, the first of which will give a pearly product:

Stearic acid	22.0
Cetyl alcohol	0.5
Glycerin	7.5
Potassium hydroxide	0.8
Perfume	0.2
Water	69.0

Dissolve the glycerin and alkali in water and melt the stearic acid and cetyl alcohol together. When both mixtures are at the same temperature mix thoroughly. Allow to stand overnight and stir again. Pearliness should develop in from two to four weeks.

Glyceryl monostearate	12.0
Lanolin	1.0
Glycerin	5.0
Titanium dioxide	1.0
Perfume	0.5
Water	80.5

The monostearate, lanolin and water are heated and stirred together. The titanium dioxide is ground with the glycerin and thoroughly stirred into the cream.

SHAMPOO: In a formula for a cold process cocoanut oil shampoo, I did not get a perfect solution. The mixture seemed to separate after it stood for a while. How can I make a good product by following the formula? Philadelphia.

The cold process cannot always be depended upon to give a satisfactory product since all oils cannot be easily saponified. Your mixture can probably be improved considerably by slowly bringing it to a boil and continuing the heating until a clear and homogeneous solution results.

HAIR PREPARATIONS: I am a subscriber of your magazine and would appreciate very much if you could help me out. I am submitting three formulas for hair preparations. Please comment on their merits, if beneficial or harmful and what improvement can be made if necessary. Brooklyn.

Concerning these formulas, they seem to be reasonably good variations of standard products. In the first formula the castor oil could be profitably increased to about three per cent. This tonic will not, of course, grow hair, but the irritants may be useful in keeping the scalp in good condition. Your dandruff pomade would be much more pleasant to use if you made a cream of it by incorporating from twenty to thirty per cent. of water. Your dandruff lotion seems all right as it stands. There seem to be no obvious incompatibilities in your mixtures but you alone are in a position to judge whether or not the products are actually effective.

NAIL POLISH REMOVER: I would like very much to secure a good formula for a nail polish remover and other information you may have relating to these products. Milwaukee.

Nail polish removers consist wholly of lacquer solvents and can be formulated very simply. Acetone has been used extensively for the purpose but ethyl acetate and other solvents of higher boiling point and less odor might be even better. Among these are the various types of "Cellosolves." Any product of this type can be made an oily polish remover by the addition of one per cent. of any satisfactory vegetable oil.

PEARLY VANISHING CREAM: As a subscriber to your excellent publication may I ask that you send me a tested, stable formula for a pearly vanishing cream with directions for mixing. I have tried vanishing cream formulas, but cannot obtain the pearly sheen. Jersey City.

The ways of making pearly vanishing creams are negative rather than positive. In other words, you must omit items that tend to retard pearliness rather than being able to add those which increase it. Pearliness is due to the crystallization of stearic acid or of an acid stearate from a cream containing stearic acid and a metallic stearate as the most important ingredients. Using 20 parts of stearic acid, one part of potassium hydroxide (or 1.5 parts of triethanolamine), five parts of glycerin, and water to make one hundred parts, and manufacturing by the customary procedure, a cream results which will become pearly after standing for a few weeks. The cream should be stirred to break it up the day after it has been made. The addition of any oils or emollient materials will reduce the pearliness substantially and even suppress it completely.

QUESTIONS

CREAM DEODORANT: I read your question in the January issue of your magazine on liquid deodorants, where you advise the use of aluminum sulfocarbolate and aluminum citrate to stop perspiration completely. What I would like to have is the percentage of these to be used in a cream where a vanishing cream would be the base. Could you give me a formula for this, using a vanishing cream, and using these materials in it and the percentage of them to be used? I have been watching your Reader's Questions for quite some time and thought possibly a formula similar to this would appear. Oklahoma City.

Aluminum compounds should be present to the extent of at least five per cent. in order to exert real antiperspirant action. We have not, however, been wholly successful in making good vanishing creams containing this percentage of aluminum compounds. The best line of experiment involves the use of the proprietary acid emulsifiers suggested for formulating acid vanishing creams.

ANTIOXIDANTS: We make a Carbolated mutton suet ointment and we would very much appreciate having your opinion as to the best antioxidants to use in the above mixture and the quantities that would be necessary. St. Louis.

In making your product, dissolve one-tenth of one per cent. hydroquinone in the mutton suet by means of heat. This will probably give as good antioxidant value as it is possible for you to obtain.

FALSE TEETH CLEANER: I am trying to find a formula for whitening false teeth. The products I have seen are powder mixtures which, when dissolved in water, clean dental plates without the necessity of brushing. Harrisburg.

These cleaning powders consist primarily of trisodium phosphate. Additional materials that can be included are sodium carbonate, borax, and other mild alkalies.

SOAPLESS SHAMPOO: Can you suggest a formula for a soapless shampoo that contains no oil but is quite effective in covering the drying effect of a detergent and results in a clear product. I should be very grateful for any suggestions that you could give me. Toledo.

Best results in this type of product are obtained by the use of mixtures of sulfonated castor oil with sulfonated olive oil and a certain amount of mineral or vegetable oil. If you do not wish to use oils you may be able to get the same emollient effect by the use of cocoa butter or spermaceti dissolved in the sulfonated oil mixture.

DISSOLVING LECITHIN: Is there a way of melting and dissolving lecithin in waxes and fats easily and rapidly. I find it rather difficult to do this when the materials are heated and stirred together in a double boiler. Mount Vernon.

Probably the best way to dissolve lecithin in a mixture of waxes and fats is to heat all the other oily ingredients together until they form a homogeneous solution. The lecithin is then added in small portions to the hot solution and dissolves quite readily.

PEELING OINTMENT: Will you kindly send me a formula for a good scalp peeler ointment. I now use an Ultra Violet Ray lamp. Milwaukee.

We suggest that you continue the use of Ultra Violet Rays for scalp peeling. Salves containing high proportions of salicylic acid are often used for skin peeling but they are uncertain and often dangerous to use. They might be especially damaging to hair.

ASTRINGENT POWDER: Can you tell us whether or not bismuth sub-nitrate would be a valuable ingredient for an astringent powder base? Under the new cosmetic regulations would the above ingredient have to be mentioned on the label. Louisville.

Bismuth sub-nitrate would be a useful addition to an astringent powder but not necessarily the best type of astringent to use.

Ingredients must be declared on the label only if the product can be classified as a drug or drug claims are made for it.

USE PATENT: We manufacture a product in which we use a chemical manufactured and patented by another company. Could we obtain a patent for the use of this chemical in our product without the consent of the manufacturer. Newark.

Your patent would be a perfectly valid patent that would have nothing to do with the manufacturer. However, you would still have to obtain the chemical from the one who manufactured and patented it, while you could only prevent others from putting it to the use covered by your patent.

QUICK DRYING: Do you know of any chemicals, not injurious to hair and scalp, that would hasten the evaporization of water? Also any physical or chemical procedure, besides the application of heat, that would accomplish the same result? New Rochelle.

The addition of alcohol or any other low boiling liquid which dissolves in water will hasten the evaporation of water. Heat will speed the drying of hair but so will the use of a fan or other means of increasing air circulation. These obvious answers indicate that the methods now in use for drying hair rapidly are and have been, the most satisfactory available.

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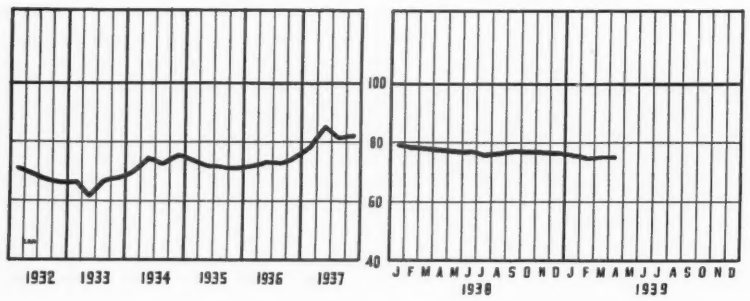
Cajuput oil 2c	Rosemary oil 11c	Tansy oil 40c
Damiana leaves 2c	Saffron, Spanish $3.00	Vanilla beans, Bourbon 10c
Golden seal root 20c	Sage oil, Dalmatian 5c	Mex. cuts 10c
Jalap root 3c	Sarsaparilla root, Mex. 4c	

Down

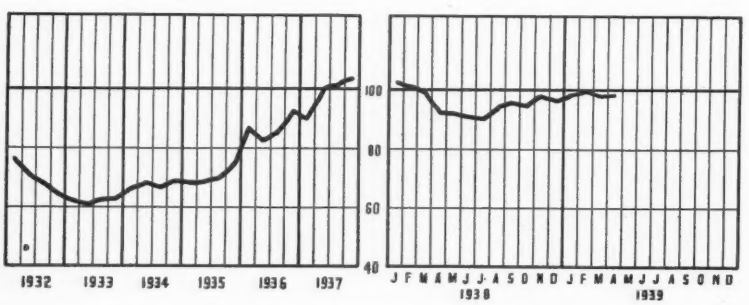
Alcohol, Den. No. 1 Spec. 1½c	Colocynth pulp 1c	Lemon oil, Italian 10c
Almond oil, sweet 1c	Coriander oil $2.00	Mace oil, dist. 3c
Bay oil, 5c	Echinacea root 1c	Myrrh gum 2c
Buchu leaves 2c	Elder flowers 1c	Nutmeg oil 3c
Caraway oil 5c	Ephedra vulgaris 1c	Patchouli oil 15c
Cassia oil, redist. 5c	Fennel 10c	Rue oil 15c
Cedar leaf oil 5c	Horehound herb ½c	Saffron American 3c
Cod liver oil $3.00	Kamala 2c	Senega root 2c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



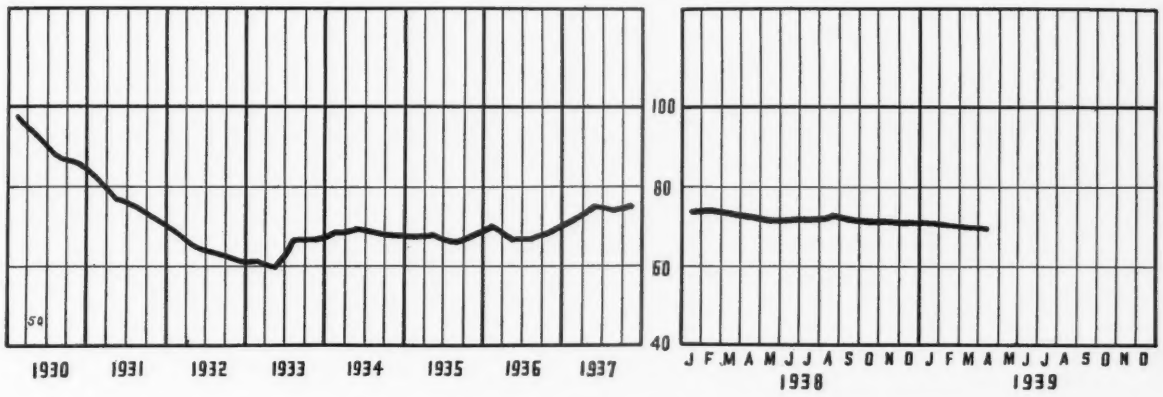
There were no changes in cosmetic raw materials prices, the index remaining at 75.0. Business in this group of raw materials was very dull perhaps because of the decline in the retail field. Department store sales were off about 12 per cent. from last year at this time. It is generally anticipated, however, that the influx of visitors to New York this summer will boost sales throughout the Eastern states.

15 Botanicals—Weighted Price Index. 1926 = 100.



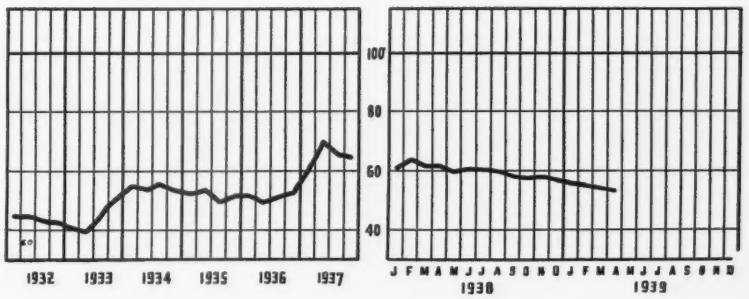
Botanicals averaged a slight increase, the index moving up to 98.3 from the previous 98.0. Agar rose from 92 to 95 cents, while buchu declined from 32 to 30 cents. Reports from Japan indicate labor shortage in the production of agar with a resulting smaller yield. The decline in buchu was primarily due to the end of the winter consuming season.

50 Raw Materials—Weighted Price Index. 1926 = 100.



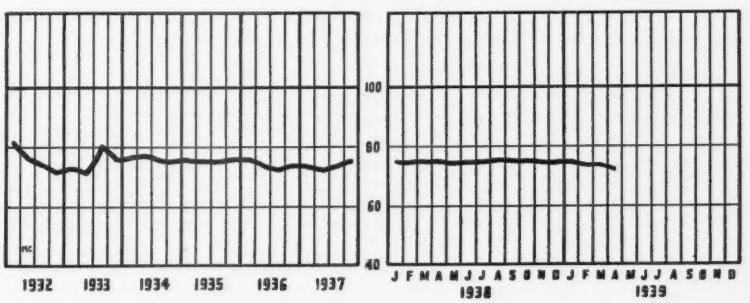
Activity in raw materials markets for April was at a minimum. The 50 commodity index of prices indicated a net decline to 69.1 from the previous 69.9. The markets as a whole were exceptionally quiet during the entire month under review. Prices in general have consistently tended to become more stable during the past few years. Various factors have worked toward the elimination of speculative activity with the result that price changes are fewer and fluctuations far less severe.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oil index also declined slightly, from 54.0 to 53.4. Cassia dropped 5 cents to 95 cents a pound; lemon oil Italian declined from $2.75 to $2.65. During late trading the producers of Exchange Brand lemon oil announced a sharp reduction in the price of the California oil to meet the foreign competition. The new price for California lemon oil is $2.00 per pound in 25 pound cans and places this material at the lowest level since 1936.

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



Medicinal chemicals averaged lower, the index declining from 73.5 to 72.4. Cod liver oil dropped from $25.00 to $22.00 a barrel and mercury metal was one dollar a flask lower at $89.00. The larger consuming season for cod liver oil is drawing to a close. Reports from Norway indicate an exceptionally heavy catch of cod fish and production of oil. These factors are responsible for the lower spot market price of this item.

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CITRUS OILS

Factors in Exchange Brand cold pressed California orange oil announced an advance during the current trading period to the basis of 90c per pound. It was reported that the extremely low prices that previously prevailed on the California oil were unjustified and that the differential between the domestic product and oil imported from the principal foreign sources was far too great.

Incidently it might be interesting to note that California oil showed the way to the production of the rest of the world. High quality oil was available in large quantities at the low price of 75c per pound quoted by the largest producers. Smaller and independent units of production were reported shading that figure to some extent. Eventually home production was destined to capture control of the outlets into consumption at least to the extent that it now supplies the majority of lemon oil consumed in this country.

High record crops of oranges and lemons are expected this season. Oranges: 81 million boxes, compared with 74 million last year, and a 1927-36 ten-year average of 50 million boxes. Lemons: 11 million boxes, against 9 million last year, and a 10 year average of 7 million.

Some years ago when a drive was on to introduce American lemon oil, prices were reduced to such low levels that a shift on the part of consumers to the domestic oil was unprecedented. When domestic oil captured approximately 80 per cent. of the market, prices firmed gradually and although they are still at attractive levels the differential between California lemon oil and Italian oil is now only 15c per pound.

With the successful sales policy on lemon oil behind them, it was only logical to assume that the largest citrus oil factors here would institute a similar policy regarding orange oil. Low prices have been the rule for some time with the result that the consuming market is largely supplied from domestic production and an upward price revision is in order to correct the price differential between domestic and imported oils. Present prices for California orange oil are, of course, still very favorable at 90c when compared to Italian oil at $2.25 and W. Indian material at $1.75 per pound. The future price trend of California orange oil, however, will undoubtedly bear watching.

An easier spot market prevailed for Italian lemon oil, the current decline amounting to 10c per pound with the range of prices now at from $2.65 to $3.40 as to brand and quantity.

To meet this move on the part of Italian producers, California cold pressed U.S.P. Exchange Brand lemon oil was very sharply reduced during late trading in the current period. The California oil is now at the attractive level of $2.00 per pound in 25 pound cans being a differential of 65c per pound in comparison with the Italian product. The new price of California lemon oil is the lowest since 1936.

COD LIVER OIL

A decline of $3.00 per barrel in the spot price of medicinal cod liver oil was noted during the trading period under review. The price range is now from $22.00 to $23.00 according to brand. The easier position in this market is primarily due to the close of the large consuming season and the favorable production and price reports from Norway.

In consequence of the good results so far this season, shipment prices from Norway have tended easier. The catch so far has been very satisfactory along the whole northern part of the coast, and, as the weather has been fair, the production of cod liver oil was a great deal above the average. Up to February 25 the catch and the output of cod liver oil in the whole of Norway amounted to 38,461 tons of cod and 19,194 hect. of cod liver oil. This compared with 22,359 tons of cod and 9,581 hect. of cod liver oil as of February 26, 1938.

The abundant production of Norwegian cod liver oil up to the present this season is due to the exceptionally rich Finmarken winter fishing which was going on during the months of December and January. Although the main fisheries, which take place at Lofoten, do not begin until February, all steaming plants were in full operation in December.

The percentage of cod liver oil from the liver this season is not greatly above the average, and the number of vessels engaged in the fishing is far less than usual. However, the cod arrived at the Finmarken coast in heavier masses than usual during the winter time.

Keeping pace with the growing popularity of vitamin products, imports into the United States of cod liver oil have increased steadily during recent years, except for a decline in 1938. Imports aggregated 5,218,000 gallons in 1938 compared with 5,916,000 gallons in 1937 and 3,470,000 gallons in 1934.

United States factory production of vitamin-containing medicinals and pharmaceuticals increased in value from $16,000,000 in 1935 to $27,000,000 in 1937.

CAMPHOR OILS

Nominal prices were still the rule for camphor oils. Stocks were so low on spot that firm quotations were practicably unobtainable. No relief from the almost intolerable situation is in sight. The development of a substitute seems the only development likely to be of lasting benefit. If such a substitute is found it will most likely change for all time the volume of business in the product in Japan.

MENTHOL

The Japanese market for natural menthol is now under absolute government control, with both the Hokuren group in Hokaido and the Kobi group of refiners in Sambi, quoting identical prices. The tightness of the market in Japan is best demonstrated by the fact that although imports into the United States are at a record low level and spot business is at a virtual standstill, the shipment price has not been changed one iota.

The Winter of 1938-39 was a good one for the consumption of menthol products, but carryover stocks of finished goods must have been colossal as there was virtually no replacement buying of menthol during the season of most active consumption.

Manufacturing consumers here are unwilling to state the extent of their purchases of synthetic menthol. This is, however, undoubtedly a transition period with a moderate but steady trend toward the synthetic material.

Needless to say, because of the conditions prevailing in the world's largest menthol consuming market, stocks in Japan must be piling up, but there are no indications of weakness as yet. The back of the situation must break sooner or later but it is anybodys guess as to when this will occur—probably not until another crop piles on held over stocks of material in Japan. For the first time there are some indications that Japan is a willing seller and anxious to move goods, but still only at a set price.

VANILLA BEANS

Again it is necessary to report an advance in vanilla bean prices. Bourbons are now minimum at $5.25 with the range to $5.75 per pound, Mexican cuts are also higher at from $5.00 to $5.25.

It is generally anticipated that there will be a decline in consumption of vanilla this year because of the high prices but in spite of this it is the opinion of some importers that the present trend of prices will continue and that by mid-summer a $6.00 market will prevail.

Because of laxity in French Colonial laws it is reported as being ever more difficult to purchase good quality Bourbon beans in France. Beans are being collected too early and there is now no way to control this situation.

Because of unsettled conditions in Europe importers here hesitate to make commitments because of the long sea trip from Madagascar to Marseille.

The next crop of Madagascar beans will be larger but it is too early to predict how much. It must be borne in mind, however, that the next crop of Bourbon beans will come on a market with practically no carryover stock.

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CITRONELLA OIL

A paradoxical situation still prevails in citronella oil in that the Java variety continued to sell about 20 per cent. below the material from Ceylon, although the former oil has always been considered a finer product from the perfumer's point of view.

This condition can be accounted for in two ways, namely a 20 per cent. crop increase last year in Java, as compared to the previous year, and the fact that Ceylon citronella oil as an odorizing agent presents better values than the Java material under certain conditions, primarily in the soap field.

Offerings of citronella Ceylon are scarce and there are only small lots offered in the spot market and very little material in the primary for prompt shipment. On the other hand, the expected increase in consumption of Java citronella oil, which alone can be used economically for the production of synthetic menthol, has as yet failed to materialize to any great extent.

Due mainly to the large crop, and in part to activities of the citronella oil exchange, exports of citronella oil from Java advanced from 1,574 metric tons in 1937 to 2,081 tons last year. Exports to the United States during these periods increased from 570 to 688 metric tons.

The yield of citronella oil in Java is dependent in a large measure on prices at the beginning of the year. Owing to the small crop in 1937, prices advanced sharply at the beginning of 1938 and resulted in large acreage increases. As a result, the total yield was so large that it seriously affected the market during the year. Due to the low prices offered at the beginning of 1938, it is anticipated that acreage of the current crop will be noticeably smaller.

EPHEDRA VULGARIS

The spot market price for ephedra vulgaris declined 1c per pound during the current trading period. There was no change in the price of ephedrine alkaloid, hydrochloride or sulfate.

Imports of ephedra vulgaris were at record levels last year, reaching a total of 1,573,000 pounds—approximately double those for 1937, and compared with 1,948,000 pounds in 1935.

In the early part of 1938, substantial quantities were imported from British India and a number of shipments were recorded as coming from Japan. The latter shipments, however, are believed to have originated in China. Since August, all shipments arriving in the United States have come direct from China.

PEPPERMINT OIL

There was an absence of demand from domestic consumers of peppermint oil but export business was unusually good, the total volume being sufficient to keep the market firm.

United States exports of peppermint oil recorded at 371,700 pounds in 1938 were close to the 15 year record of 386,000 pounds established in 1936 and compared with 349,500 pounds exported in 1937.

Foreign demand for peppermint oil of United States origin fluctuates from year to year but the percentage of the total crop exported appears to be increasing. Only 21 per cent. of the crop was sold abroad in 1930. Forty per cent. of the crop was exported in 1936 and sales abroad in 1938 accounted for approximately 50 per cent. of that year's crop.

Production during 1938 aggregated 732,000 pounds compared with 964,000 pounds during 1937, 957,000 pounds in 1936, and 1,352,000 pounds in 1935.

In the middlewest, interest was centered on preparations for the new crop which will be planted soon. No estimates were available as to the probable acreage. It was generally conceded that carryover stocks in the primary market were comparatively heavy.

CLOVES

The crop statement from the Agricultural Department, Zanzibar, for the quarter ended December 31, 1938, is as follows: As forecast previously, only a negligible clove crop has either been gathered or is visible on the trees, and it is considered very unlikely that the total crop of Zanzibar and Pemba for the seasonal year 1938-1939 will exceed 25 per cent. of the normal annual export of cloves.

The Market Review of the Clove Growers Association states that the quarter ended February 31, 1938, was particularly featureless until Madagascar selling pressure made its appearance in most markets and overseas prices fell somewhat on lower offerings from there. So far the competition follows a normal course, although the quantity which will be available for export to markets in which Zanzibar is interested is reported to be somewhat higher at four thousand tons, than during the preceding seasonal year. The suggestion in last quarter's review that the current harvest was likely to be extremely poor is materializing as will be seen from the fact that the deliveries from July 1, 1938, to December 31, 1938, half the seasonal year, were 2,670,174 pounds. Of this quantity Zanzibar supplied 25 per cent. Stocks in the hands of exporters at the end of the quarter must have been very small. The overall quality was inferior to that of last season, due to the abnormal weather conditions during the quarter.

SENEGA ROOT

Although consumption of senega root in the United States was satisfactory this winter the consuming season is now drawing to a close so that the market for spot goods has eased somewhat. Prices are down 2c per pound with the range now at from 62c to 64c per pound.

Senega is obtained mostly from Canada where it is gathered by trappers in the vicinity of Winnipeg. Just as soon as the frost leaves the ground new collection will be underway and this has also had a depressing effect on the market.

It is said that approximately 80 tons of Canadian senega root is imported annually into the United Kingdom. London supplies of this root are reported to be short at present and if this results in considerable replacement buying of new crop material the market may strengthen sufficiently to offset further declines.

LIME OIL

March was the first month in a long time during which there was no decline in the market price of lime oil. In this respect the market might be said to be steadier. Prices for West Indian and Mexican oils of lime are at their lowest level compared with prices during the last five years. It is quite possible that the high prices for this item which prevailed a few years ago encouraged the planting of new orchards which are now coming into production. At any rate the supply of oil seems to be far in excess of the current demand. The competitive situation between Mexican and West Indian producers is still a factor which is likely to prevent a definite reversal in the market trend of lime oil.

ROSE OIL

The spot market for rose oil was active within normal limits and prices continued as steady as heretofore. Turkey's production of rose oil aggregated 280 kilograms, according to estimates, which was considerably in excess of that for 1937. The Isparta plant, the largest in Turkey, is reported to have produced 50 kilograms during the year, which compares with 37½ in 1938, and a plant at Burdur is believed to have increased its output considerably over the 25 kilograms reported for 1937. The carryover at the end of the year is believed to have been 100 kilograms.

Exports of rose oil from Turkey in the first 10 months of 1938 were recorded at 187 kilograms, which compared with 252 during the whole of 1937 and 126 in 1936. The United States imports of Turkish rose oil during the first 10 months of 1938 amounted to 21 kilograms valued at 4,021 Turkish pounds.

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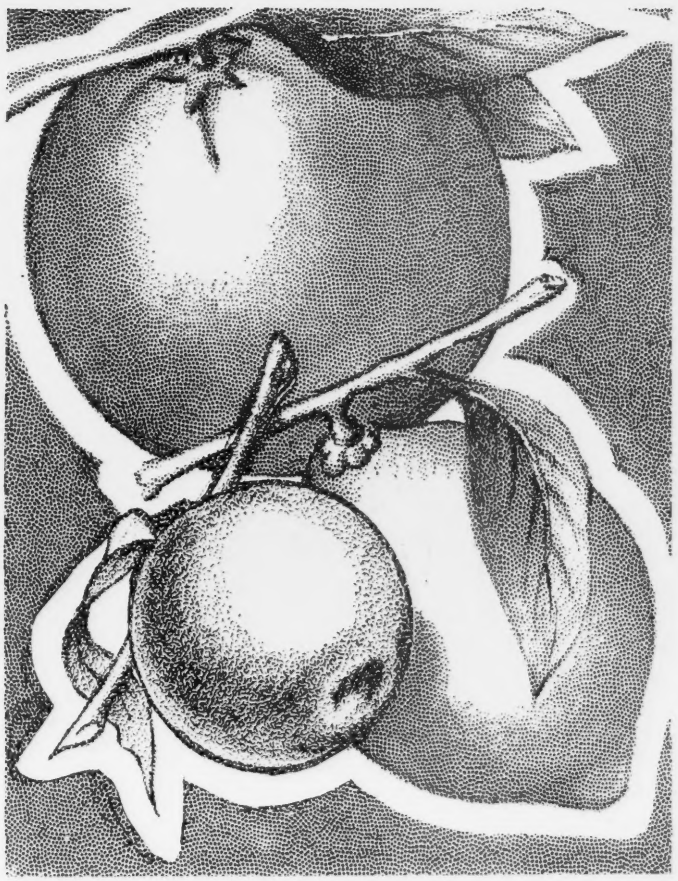

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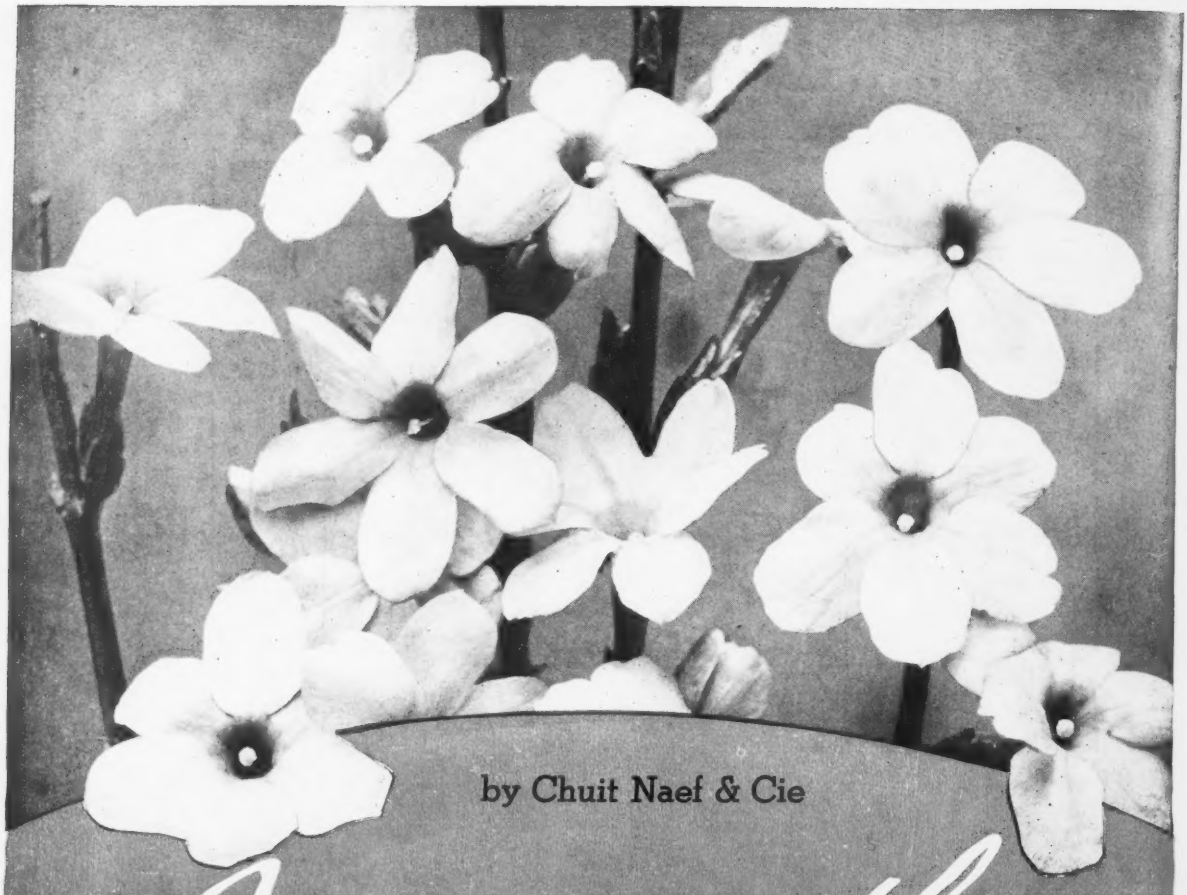

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